

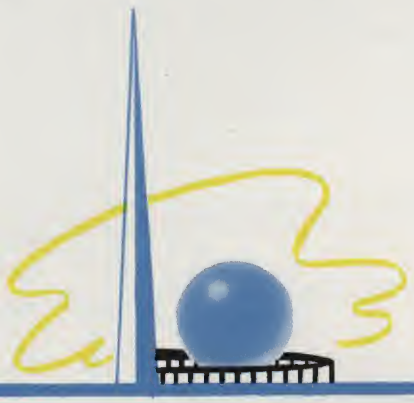
SHOWERS FOR THE SERVANTS' QUARTERS SUMMER COTTAGES AND CAMPS TOO!

A separate shower in the servants' quarters gives full privacy to the master bath and makes refreshing personal cleanliness both convenient and enjoyable for the servants.

The ease of installation and economy of this FIAT Shower Cabinet also makes it ideal for summer cottages and camps.

Request your architect or plumbing contractor to help you select the FIAT models for your home.

While visiting the New York World's Fair, see FIAT Shower Cabinets and Glass Enclosures on display in Home Building Products Bldg., Space D-3, and also in Model Homes.



YOU ARE CORDIALLY INVITED TO VISIT ONE OF THESE SHOWROOMS

NEW YORK
101 Park Avenue

CHICAGO
Rooms 7-107 7-108
Merchandise Mart

PHILADELPHIA
1309 Arch Street

MINNEAPOLIS
Room 412, National Building

BOSTON
16-18 Columbus Avenue

WASHINGTON, D. C.
1254 24th Street N. W.

FIAT METAL MANUFACTURING CO., INC.

FACTORIES

21-45 Borden Avenue, Long Island City, New York

1209 Roscoe Street, Chicago, Illinois

FITZGIBBONS

Your Guide to dependable, low-cost

HEATING

★

AIR CONDITIONING

★

DOMESTIC HOT WATER



Third Edition

FITZGIBBONS

Your Guide to dependable, low-cost

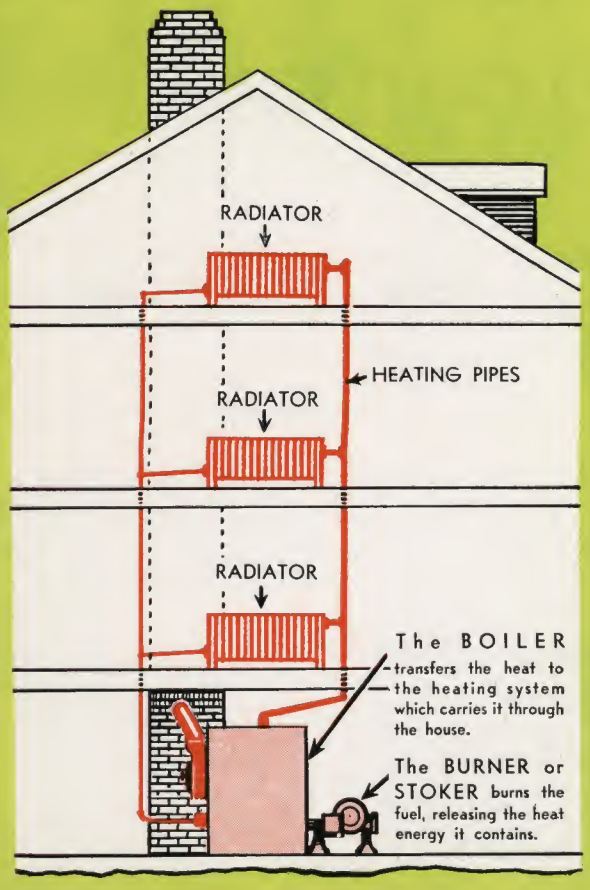
HEAT ★ HOT WATER ★ AIR CONDITIONING

★ Is the home you are building going to be the cozy, comfortable place you anticipate? The answer depends to a very large extent upon the mechanical equipment that goes into it—the equipment for *heating, hot water* and *air conditioning.*

Your home may be attractive, it may be well laid out and nicely finished and furnished. Even so, you will never be entirely happy in it if you cannot heat it properly in winter, if you cannot maintain uniformly comfortable, healthful conditions all through the year, or if you cannot get all the hot water you want for kitchen, laundry and bath, when you want it . . . and all at reasonable cost.

Heat, hot water and air conditioning are *so* important that, even though you depend on your Architect, Builder or Heating Contractor to plan these services, it is well for you to check up on the equipment being selected and satisfy yourself that dependable, economical results are being assured.

The information contained in the following pages of this bulletin will help to guide you in doing this.



Simplified diagram of a heating system. It shows the three main parts to every system and makes clear the leading part played by the BOILER in heating your home.

Check particularly these vital points

HEATING BOILER

Every heating system consists of three main parts:

(1) *The fuel burning mechanism*
Oil burner, gas burner, mechanical coal stoker, or just the plain grate if you are going to fire your coal by hand.

(2) *The heat transfer unit*
This is the boiler.

(3) *The pipes and radiators or ducts*
Ducts are used where you have air conditioning.

Now, the fuel burning mechanism, be it oil burner, gas burner, or coal stoker, *does not heat the house.* Its function is to burn the fuel and so release the stored up heat energy.

It is the boiler that picks up this heat and transfers it to the boiler water, from where it is carried by the piping to all parts of the house. And upon the speed and efficiency with which the boiler is capable of performing this function, depends the speed with which your house will be heated, and the amount of fuel you will have to burn to keep it properly heated. The design of the boiler also has an important bearing on the efficiency with which the fuel burning mechanism—oil or gas burner or coal stoker—performs its function of burning the fuel. For satisfactory results you must have a boiler designed and built specifically for the fuel you are going to burn.

For Further Information turn to page 16

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So you see, *the boiler* is the important element in any heating system, the principal factor in determining heating performance and heating costs.

By all means, check up on the heating boiler that is going into your home and when you do, check particularly for the following points:

IS IT A STEEL BOILER?

In the old days when hand firing of coal prevailed, residence boilers were made of cast iron. Then came the development of automatic heating with oil, gas and mechanical stokers.

At first, burners and stokers were installed in existing boilers. It soon became evident, however, that these boilers were not suited to automatic firing. Heating was slow and fuel consumption was high.

Attempts were made to redesign some of the old type boilers and dress them up for automatic firing, but this proved a costly and impractical expense.

The development of scientifically designed steel boilers provided the answer to the problem; steel provides maximum strength and endurance; it offers every latitude to scientific designing; it insures efficiency and economy in operation; it eliminates all possibility of cracks and breaks.

For proof of the superiority of steel boilers, one needs but to turn to the large commercial, industrial and institutional buildings. *In these buildings where heating service must be absolutely satisfactory and reliable, and where heating costs must be kept as low as possible, steel boilers are most generally used.*

Today, steel boilers for oil, gas, stoker or hand firing, are available for any and every size home. Thus, every home owner can now enjoy their advantages. And so, if you want to be sure of quick heating, uniform temperatures, low fuel bills and freedom from boiler worry and trouble for the life of your building, *see to it that a modern steel boiler goes into your home.*

IS IT EASY TO CLEAN?

In selecting a boiler this feature is usually not given the attention it deserves. With all combustion—coal, oil or gas—there is *some* deposit of soot on the working surfaces of the boiler. Now, this soot, since it does not allow heat to pass through readily, cuts down the boiler's efficiency. Periodic cleaning is, therefore, essential with every boiler.

In many boilers, flue passages are very hard to get at. These difficult-to-clean boilers are generally not cleaned, which means a constantly decreasing efficiency reflected in poorer heating and steadily mounting fuel bills.

Be sure you get a boiler that is easy to clean.



Plenty of hot water when you want it. Make sure you are going to have it in your home.

WILL THE BOILER SUPPLY YOU WITH DOMESTIC HOT WATER?

In former years, you had to have a lot of separate equipment for supplying domestic hot water. But now, you can get a boiler that will give you all the hot water you need, all year 'round, even without a storage tank. Think of what that means in saving on initial cost of equipment, in space saving and in hot water costs. *Certainly you want such a boiler.*

★

On the following pages you will find illustrations and descriptions of *steel boilers* for oil, gas, coal or mechanical stoker firing that satisfy all requirements, including the hot water and other special points covered in the foregoing paragraphs. These boilers work equally well in steam, vapor, vacuum or hot water heating systems.

AIR CONDITIONING . . .

A word here, about AIR CONDITIONING. Today, even small homes of moderate cost are being air conditioned. A few years hence, air conditioning will unquestionably be the rule in all new buildings and a home without this modern improvement for health and comfort, will be definitely less "sellable." Plan now to safeguard your investment. Read about the developments described on pages 12 to 15.

FITZGIBBONS

the FITZGIBBONS 80 OIL-EIGHTY AUTOMATIC

for automatic heating with OIL

★ For satisfactory heating with oil you want first of all a *steel boiler.* Only steel has the combined strength and resiliency to withstand the repeated expansion and contraction of metal caused by the continual on-and-off operation of the burner, and only steel permits of a design that provides the conditions the burner needs, to burn oil efficiently. Oil Burner men themselves recognize this, as is indicated by available statistics, which show that 43 out of 73 oil burner manufacturers who distribute boiler-burner units, have selected *steel* boilers for use with their burners.

Next you want a boiler that is capable of absorbing and transferring heat as fast as the burner liberates it so that no heat will be wasted and so that your house will heat up quickly in response to burner operation. Only a *steel* boiler, designed and built expressly for oil burning, can do this, and give you quick heat and uniform temperatures at low fuel cost.

Such a boiler is the Fitzgibbons OIL-EIGHTY Automatic, the boiler that is illustrated and described on the next two pages. This handsome modern steel boiler will not only assure you of quick, dependable, low-cost heat for as long as your house lasts, but in addition will *provide you with an unfailing supply of domestic hot water, winter and summer.*



For Further Information Turn to Page 16



ALL COPPER-STEEL

Built entirely of steel boiler plate containing a fixed percentage of copper fused with the metal, which serves to effectively resist corrosion. The tubes as well are made of this same rust-defying, copper-bearing steel, assuring an equally long life.

HIGHLY EFFICIENT

The OIL-EIGHTY is in reality a *small power plant boiler*, similar to the big Fitzgibbons steel boilers. It embodies the features which give these big boilers the dependability and economy demanded of them—the developments of an unbroken 50 years of successful steel boiler building.

OPERATES WITH ANY OIL BURNER

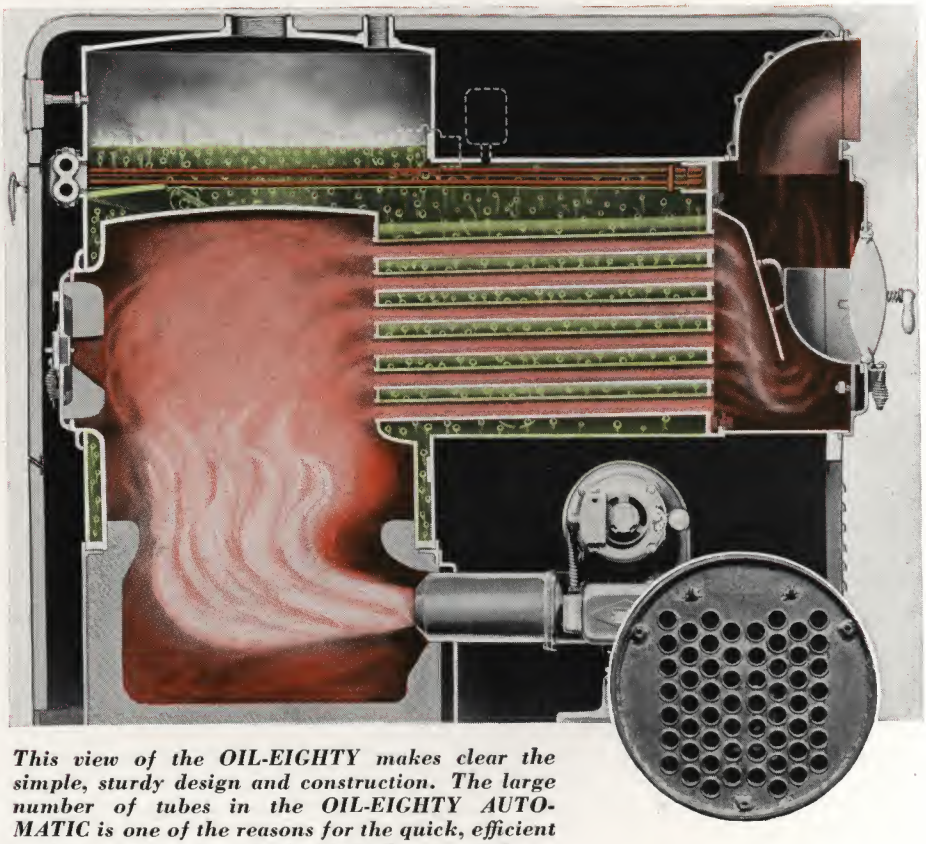
Any good oil burner of either the rotary or gun type, can be used with the OIL-EIGHTY. This leaves you free to select the burner that offers you the most reliable service in the particular section where your home is located—an important consideration. Your local oil burner dealer will be glad to see an OIL-EIGHTY specified, because burner men generally, know that this boiler provides the conditions essential to best burner performance.

HOT WATER SUPPLY

On pages 10 and 11 of this bulletin you will find a description of the Fitzgibbons submerged domestic hot water supply copper coils available in OIL-EIGHTY boilers.

COMPACT AND ATTRACTIVE

The illustration gives but a fair idea of the beauty of the OIL-EIGHTY. No picture can do more.



This view of the OIL-EIGHTY makes clear the simple, sturdy design and construction. The large number of tubes in the OIL-EIGHTY AUTOMATIC is one of the reasons for the quick, efficient heat transfer for which this boiler is noted.

But beauty is not all. Within that tastefully colored, chromium-trimmed steel jacket are housed *all of the essential equipment for automatic oil heat and year 'round domestic hot water service* including burner controls. Though out of sight and safely protected, burner and controls are readily accessible through the large, easily removable panels. The space-saving features of the OIL-EIGHTY will enable you to do a lot more with that extra basement room.

THOROUGHLY INSULATED

With the OIL-EIGHTY your basement room can be just as comfortable as any other room in the house because the entire jacket is heavily lined with insulating material which keeps the heat *inside* the boiler. This advantage is particularly appreciated when the boiler is operated in the summer for hot water. Burner and combustion sounds are also minimized by the enclosure of the burner.

EASY TO CLEAN

Cleaning the OIL-EIGHTY is a very simple operation, infrequently required because of the boiler's high combustion efficiency. A few strokes of the wire brush (supplied with boiler) through the straight, unobstructed tubes, accessible through the large front and rear doors, remove all deposit. In a few moments boiler surfaces are clean as new. Thus, the boiler's initial high efficiency is readily maintained.

TWELVE SIZES

This wide range of sizes offers you a boiler that is neither too large nor too small, but just right for your heating requirements—and that means proper heating and maximum economy.

The OIL-EIGHTY works equally well in steam, vapor, vacuum or hot water heating systems.

ADAPTED FOR AIR CONDITIONING

If you are not planning on air conditioning now you may want to add it later. The OIL-EIGHTY will permit you to do this, for it is perfectly adapted for service with air conditioning equipment.

★

If you are going to burn oil, the OIL-EIGHTY is the soundest investment you can make from every point of view.

the FITZGIBBONS GAS-EIGHTY AUTOMATIC

for automatic heating with **GAS**



THE GAS-EIGHTY GIVES YEAR 'ROUND INSTANT DOMESTIC HOT WATER FOR A FEW CENTS A DAY—NO STORAGE TANK REQUIRED

Without a storage tank or any external water heating equipment, if it is so desired, the Gas-Eighty will provide all of your domestic hot water requirements summer and winter at no greater yearly cost than for an outside heater and storage tank. See page 10 for a complete description.



FOR AUTOMATIC HEATING WITH GAS

Automatic heating with gas for your home is very similar to automatic heating with other fuels in so far as basic combustion and heat transfer principles are concerned. Hence the design and construction of the Fitzgibbons Gas-Eighty resembles other boilers made by this company.

The Fitzgibbons Gas-Eighty is built of strong, durable rust-defying "Copper-Bearing" Steel (2½ times more rust and corrosion resistant than ordinary boiler plate steel). It is encased in a beautiful well insulated steel jacket of streamline design and the gas burner of your selection may be entirely enclosed within the jacket, out of sight.

Like all Fitzgibbons Boilers, the Gas-Eighty is easy to clean, thereby maintaining its "day-of-installation" efficiency through the years. Its quick pick-up of the heating load and rapid steaming or water heating qualities are enhanced by this feature.

Many installations of the Fitzgibbons Gas-Eighty with the leading makes of gas burners are giving splendid satisfaction in homes from coast to coast. And low fuel bills are convincing home owners of the advantage of changing to a steel boiler built for gas such as the Gas-Eighty.

Utility Companies favor the Gas-Eighty because of its fuel economy, domestic hot water supply at low cost, adaptability to leading makes of gas burners and because Fitzgibbons co-operates with their heating departments in the estimating and sizing of projects calling for gas as a fuel.



The Gas-Eighty Steel Boiler—Note attractive appearance of this modern boiler for the modern fuel.

FITZGIBBONS

FITZGIBBONS 80
COAL-EIGHTY AUTOMATIC

for automatic heating with STOKERS

★ Developments in mechanical coal stokers have made automatic heating with coal thoroughly practical and satisfactory today. But, as is the case with oil or gas burners, results obtainable with a mechanical stoker, depend to a very large degree on the heating boiler used with the stoker. If the cleanliness, excellent heating performance and economy now feasible with mechanical stokers, are to be realized, a boiler suited to this particular type of firing is needed. The boiler must provide the conditions which the stoker needs for efficient combustion, and for quick, efficient transfer of the heat released by the burning of the coal. Such a boiler is the Fitzgibbons COAL-EIGHTY AUTOMATIC, illustrated and described on this and the next page.

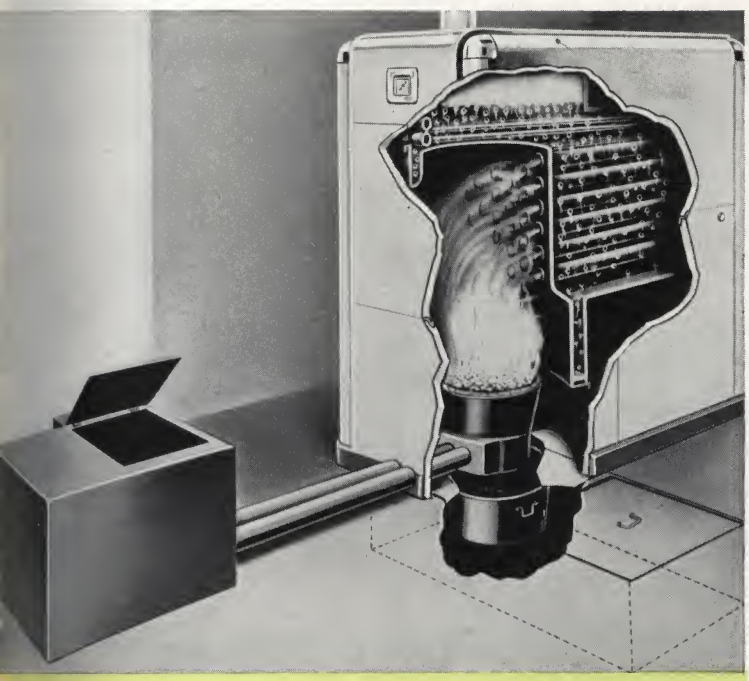
The design and construction of this boiler are based on the findings of an exhaustive survey and study of mechanical stoker requirements. As a result, *the COAL-EIGHTY AUTOMATIC will team up with anthracite stokers,* and give you an automatic heating unit that is as attractive, as clean and as efficient as an oil or gas heating installation. Its principal features and advantages are given on the next page.

Note below the modern basement installation of a Fitzgibbons Coal-Eighty Automatic with a "Bin-feed" type stoker. Hot water is supplied from the tanksaver, no storage tank required.

ANTHRACITE INDUSTRIES INCORPORATED approved

The FITZGIBBONS COAL-EIGHTY AUTOMATIC has been awarded the CERTIFICATE OF APPROVAL of the **ANTHRACITE INDUSTRIES, Inc.** after exhaustive tests in its laboratory at Primos, Pennsylvania.



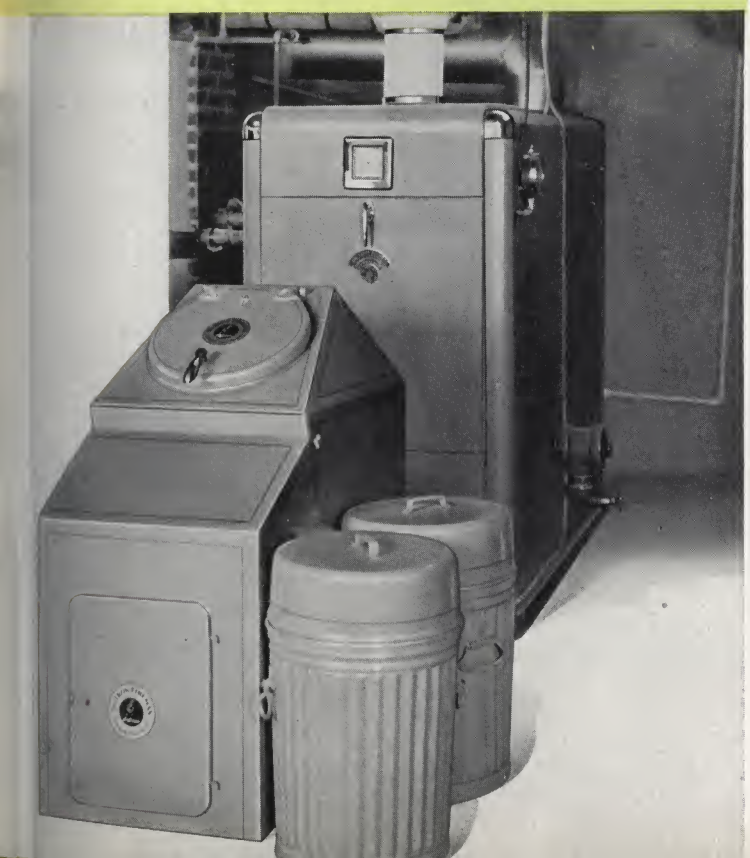


Here is a typical layout of the modern "bin-fed" type of residence stoker installation for which the COAL-EIGHTY AUTOMATIC is ideally suited. Above is shown an actual installation of this type.

The clean, attractive combination of a "bin-fed" type of stoker installation and the COAL-EIGHTY AUTOMATIC makes the dream of an extra basement room a reality for any home in which coal is to be burned automatically.

In the picture below, note the dust-proof construction of the COAL-EIGHTY AUTOMATIC, its thickly insulated, steel jacket covering all doors and extending clear down to the floor.

Note also the absence of a domestic hot water storage tank, the need for which is eliminated by the Fitzgibbons TANKSAVER (See page 10) available with the boiler.



ALL COPPER-STEEL

Built entirely of copper-steel boiler plate, combining strength and resiliency with life-time crack-proof rust-resisting durability.

HIGH COMBUSTION CHAMBER

Provides ample room for complete combustion of the gases before they strike the crown sheet, even with long-flame coals. This means smokeless operation and avoids the usual necessity of raising the boiler.

HIGH EFFICIENCY

Complete combustion and rapid, efficient heat transfer are assured by the general design, and by certain exclusive features which maintain a balance draft, equalize the flow of gases through the tubes, and provide an exceptionally positive and powerful water circulation. Quick heat, uniform temperatures, and low fuel bills are the result.

COMPLETELY ENCLOSED

The thickly insulated steel jacket, extending right down to the floor, prevents the escape of fly ash, and saves heat by keeping it *inside* the boiler, an important advantage when the stoker is operated for summer hot water. Machine-finished and gasket-sealed doors also aid in preventing fly ash and gases from leaking out.

HOT WATER SUPPLY

On pages 10 and 11 of this bulletin is a description of the Fitzgibbons submerged domestic hot water supply coils available in COAL-EIGHTY AUTOMATIC boilers.

ATTRACTIVE APPEARANCE

The tastefully colored, chromium-trimmed steel jacket adds the touch of beauty so desirable in modern basement plans. Standard locations are provided for aquastats and all other automatic controls.

EASY TO CLEAN

Because all combustion surfaces, including the straight, unobstructed fire tubes are readily accessible through the large front and rear doors, the boiler can be thoroughly cleaned in a few moments, thus always maintaining the initial high efficiency. Stokers can be installed in the rear or on either side, leaving the front clear for cleaning.

TWELVE SIZES

This wide range makes it possible to meet the exact heating needs of your particular size home. This means proper heating with maximum economy. If you are going to have automatic coal stoker heat, *it will pay you to see that a COAL-EIGHTY AUTOMATIC Boiler is specified.*

ADAPTED FOR AIR CONDITIONING

The COAL-EIGHTY AUTOMATIC works equally well in steam, vapor, vacuum or hot water heating systems and is adaptable for service with air conditioning equipment.

THE FITZGIBBONS TANKSAVER

This is the Fitzgibbons TANKSAVER described below, an exclusive Fitzgibbons development, available only in Fitzgibbons Steel Heating Boilers.



THE FITZGIBBONS *Submerged* HOT WATER SUPPLY COILS

★ This patented unit, shown above, is available as optional equipment with all Fitzgibbons heating boilers for automatic firing with oil, gas or mechanical coal stoker. It is mounted entirely inside the boiler, with provision for easy external connection to the water system.

Located just below the water line where the boiler water is hottest, the Fitzgibbons TANKSAVER provides, at low cost, a supply of clean hot water for laundry, kitchen and bath, *without a storage tank.*

The Fitzgibbons TANKSAVER is made in a range of sizes which deliver from 100 to 400 gallons rate of flow per hour, with the boiler water at 212° F. and a city water pressure of 30 pounds. The capacities which are available with any particular boiler depend on the size of the boiler.

Fitzgibbons engineers will be glad to cooperate in selecting the right size of TANKSAVER to supply the volume of hot water that meets your requirements. *The TANKSAVER is available only with Fitzgibbons boilers.*

You can readily appreciate how much more you can do with your basement where you require *only the one unit* to take care of both heating and hot water —an attractive Fitzgibbons life-time steel boiler with its self-contained submerged TANKSAVER.

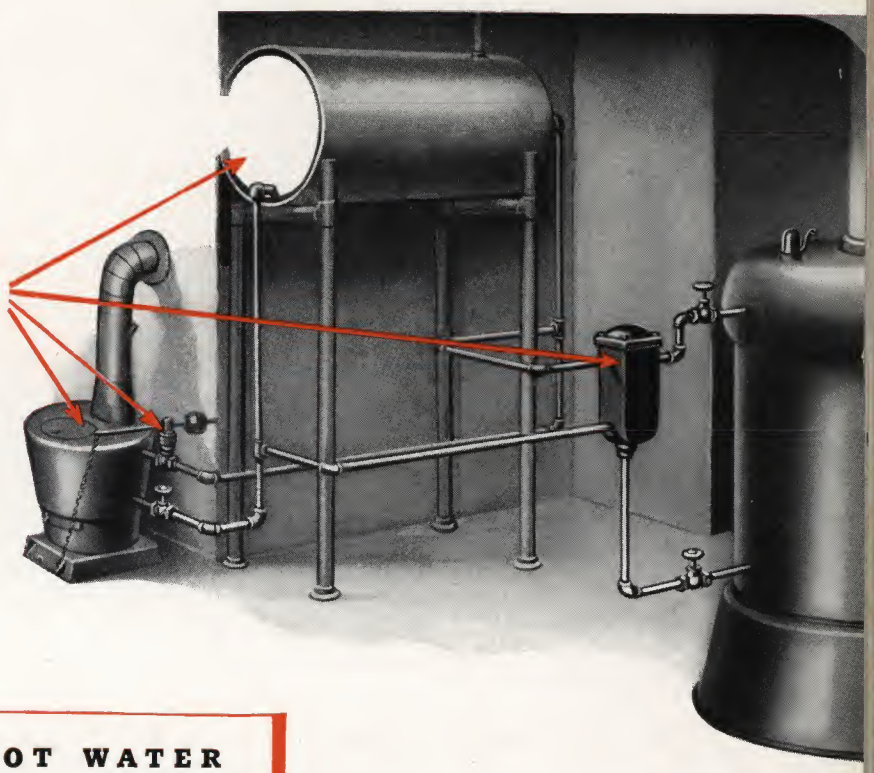
With Fitzgibbons boilers for hand firing, and where automatic control of domestic hot water supply is not possible, the Fitzgibbons Tankheater is available at option.

With any Fitzgibbons Boiler for automatic heating

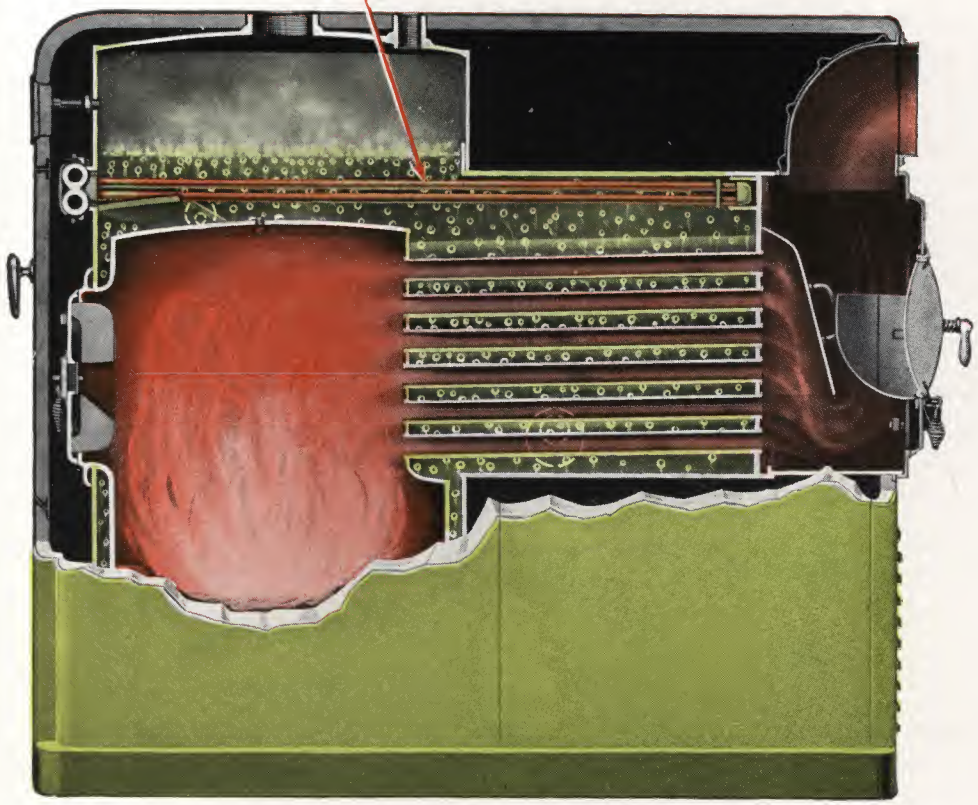
THESE

are all replaced with

THIS



SUBMERGED COPPER HOT WATER COIL LOCATED INSIDE THE BOILER
THE FITZGIBBONS TANKSAVER



This picture shows the TANKSAVER mounted in place in a Fitzgibbons OIL-EIGHTY equipped with an oil burner. It is located in the same position, just below the water line, in boilers for gas or stoker firing. When ordered, it comes assembled in the boiler. The Fitzgibbons TANKSAVER is made of copper and will not rust. Therefore the water that comes out of it is clean and pure.

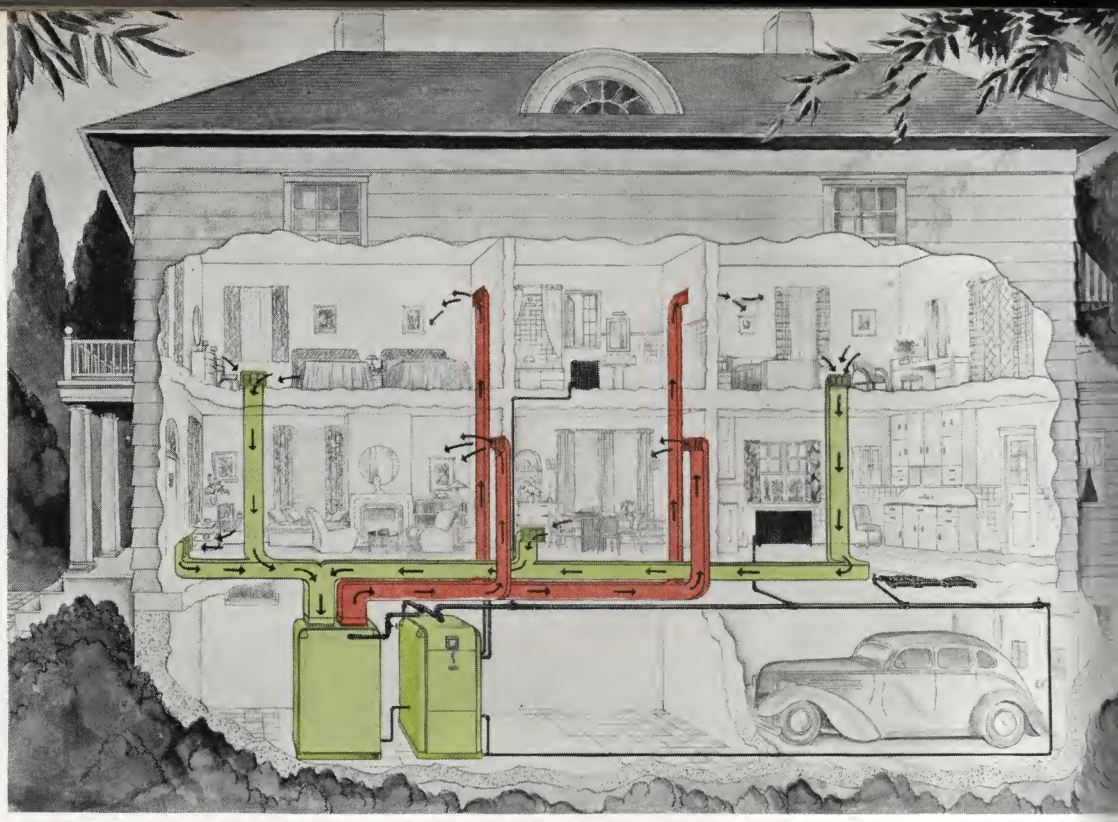
Owners of Fitzgibbons boilers, everywhere, agree that the abundant supply of clean hot water they get from the *invisible* TANKSAVER, is a source of great satisfaction and comfort.

The

"SPLIT-SYSTEM" AIR CONDITIONER

★

THE MODERN WAY TO HEAT YOUR HOME AND FURNISH YEAR 'ROUND HOT WATER



A DIAGRAMMATIC ILLUSTRATION OF TYPICAL SPLIT-SYSTEM —Note Ducts to Principal Rooms and Radiators to Other Rooms

TYPES OF FITZGIBBONS APPARATUS FOR SPLIT-SYSTEMS OF AIR CONDITIONING SERVICE

For New or Old Buildings

FLOOR TYPE OF AIR CONDITIONING UNIT SEPARATE FROM BOILER

The Fitzgibbonsaire is an air conditioner floor unit which works in tandem with the Fitzgibbons Steel Boiler for oil, gas or stoker firing. This unit is often used to add air conditioning to a home already constructed, or in a new home where it is desirable to locate the air conditioning in one part of the basement, and the heating boiler in another. The operation of this unit is similar to that of the Boiler Air Conditioner later described. Domestic hot water supply may be furnished with this type of installation as well, since the boiler may be equipped with the Fitzgibbons Tanksaver.

CEILING TYPE OF AIR CONDITIONING UNIT FOR SELECTED ROOMS

The Fitzgibbonsaire Junior is a ceiling type conditioner which extends the scope of air conditioning to homes that are already equipped with Fitzgibbons boilers, the subdivision of the house into air conditioned spaces and radiator heated spaces, and the zoning of heating with a home where it is desirable to place a number of units, all receiving their source of heat from the same boiler. Its chief advantages are that it is light in weight; quickly and easily installed; is suspended from the ceiling and takes up no floor space, and may be used in homes now equipped with hot water or steam heating systems. Furthermore, it can be adapted to Summer cooling by the simple installation of an additional coil.

COMPLETE BOILER AND AIR CONDITIONING UNIT

The Boiler-Air Conditioner combines within one stream-lined jacket all the functions of conditioned air, boiler-radiator heat and domestic hot water supply. The jacket, in most cases, conceals the firing unit also, in the space provided. Therefore, the oil burner, gas burner or stoker may be enclosed within the jacket out of view and out of the way of possible injury through inexperienced tinkering. The Boiler-Air Conditioner is equipped with the Fitzgibbons Tanksaver, described on page 10, the submerged copper coil which furnishes a plentiful supply of domestic hot water in Summer and Winter without the necessity for a storage tank.

SPLIT-SYSTEM ADVANTAGES

Before you select any system of air conditioning, it is well to know all that air conditioning can give you—all that the term may cover. For air conditioning may mean nothing but the supplying of air more or less humidified; or it may mean a broad combination of services, which brings to the home comfort, healthfulness and convenience. The latter type of air conditioning costs so little more at first, that its greater services should be seriously considered. This system of air conditioning is the "Split-System" which means first of all, correctly conditioned air properly humidified, thoroughly cleaned, adequately heated and evenly circulated. In addition to this, it means domestic hot water supply tanklessly and instantaneously, Summer and Winter, and the ability to use the source of heat for steam or vapor or hot water radiator heating in such rooms as kitchen, laundry, bath and garage, where, for obvious reasons, it is not practical to recirculate the air. This is best shown on the illustration on the preceding page.





BASEMENT UTILITY AND BEAUTY

As the illustration shows, the Fitzgibbons SPLIT-SYSTEM CONDITIONER is not only a remarkable space saver, but a pleasingly attractive unit as well —one that presents entirely new and broader possibilities for the design and arrangement of the basement. It makes practicable the extra basement room, even in the small house.

It will pay you to give this unit your careful consideration. Not only will it make your home a comfortable and more healthful place in which to live, but by thoroughly cleaning the air, it will also reduce cleaning labor and laundry bills. It will also add considerably to the value of your house.



SPLIT-SYSTEM AIR CONDITIONING

This AIR CONDITIONER *cleans* the air, *tempers* it, *humidifies* it, and forces the circulation of this thoroughly conditioned, healthful and comfort-giving air to every room you desire. It is ideal for the popular and economical "split-system" type of installation—the combination of air conditioning in selected rooms, and boiler-radiator heat elsewhere. It will, if you desire, provide air conditioning in every room.

It gives you quiet operation. It is entirely sound-proofed. Moving parts are mounted on special bearings which absorb all vibration. Air ducts do not communicate directly with the combustion chamber, hence they cannot act as "speaking tubes" for even faint sounds of operation.



STEEL BOILER HEAT

The Fitzgibbons Split-System Conditioner works *with any good oil burner.* This means that the burner you may find it advantageous to select, will be at home in this unit—where it may be concealed behind easily removable panels in the jacket, safe from dust, careless feet, or prying fingers. The air conditioner works equally well *with any domestic coal stoker,* or *with any gas burner.* It is built in types specially designed for these fuels, thus for the first time applying to air conditioning, the advances recently made in these methods of firing.



HOT WATER SUPPLY

Every Split-System Conditioner may be equipped with the Fitzgibbons TANKSAVER, described on page 10, which provides abundant, clean hot water year 'round at low cost—eliminating the need for a storage tank or other external hot water apparatus.

FITZGIBBONS

the FITZGIBBONS *Directaire* CONDITIONER

A DIRECT-FIRED AIR CONDITIONER

designed for use with either an oil burner, gas burner, or automatic coal stoker. This unit was conceived with the idea of building a direct-fired furnace that would develop high efficiencies, provide adequate combustion area, deliver even heat quickly—yet it was developed from an inheritance of more than half a century in the design and construction of products known for their quality of combustion, construction, and durability.

Thus Fitzgibbons offers in the Directaire a totally different method of heat transfer through direct firing; a totally different consideration of the importance of economy of operation and overall efficiency; a totally different coordination of the functions of Air Conditioning, viz., filtration, circulation, tempering, and humidification in a unit simple in design yet rugged in construction.

The Fitzgibbons Directaire represents the first scientific approach to warm air conditioning by a manufacturer whose entire experience has been spent in designing and constructing products known for their ability to burn fuel economically.



ENCLOSING JACKET—This model was designed to completely incase the oil burner, or gas burner for protection and to improve the appearance of the installation.

BETTER LIVING CONDITIONS POSSIBLE WITH THE MODERN FITZGIBBONS *Directaire* CONDITIONER

Air conditioning for the residence is here. Thousands of homes are being constructed especially for this type of modern heating. The circulation of clean, humidified, warmed air controlled to even temperature makes for the better living conditions which every one is seeking. The remodeling of the old-fashioned basement into a smart, attractive and useful room has been a great boon to home owners who desired to install air conditioning with automatic heat in their present residences. Whether the house be new or old, the basement which was formerly a dirt trap has now become a thing of beauty in which there is placed a scientifically designed and attractive conditioner, in keeping with the modern surroundings of the recreation room.



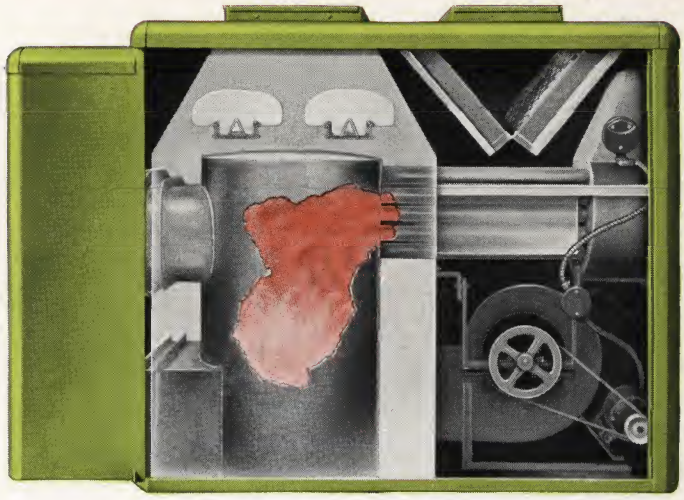
STANDARD JACKET—This model was designed for stoker firing and for installation of other types of automatic firing equipment where the enclosing jacket is not required.

The Fitzgibbons DIRECTAIRE Conditioner is built of steel for long life and durability—copper-bearing steel which resists corrosion and rust much more effectively than ordinary steel used in many types of furnaces. It is a highly efficient conditioner, designed along distinctive lines to secure the greatest volume of heating for the least amount of fuel. This is one of the reasons why it is so economical to operate and why the quick transfer of the heat through the metal is so rapidly converted into comfort giving heat. It is quiet in its operation, thereby eliminating the transmission of any combustion or mechanical sounds that might find their way into the home through the ducts provided for the distribution of the conditioned air.

TWO MODELS . . .

The Fitzgibbons Boiler Company offers the DIRECTAIRE in two models. The Enclosing Model or the Standard Model.

FEATURES and ADVANTAGES



CONSTRUCTION

The units are constructed of heavy copper-bearing steel plate and tubes. The construction of the unit is such that all joints or seams exposed to the air stream are welded, preventing leakage of combustion gases into the air stream.

COMPACTNESS

Designed in such a compact manner as to occupy the smallest floor space possible.

QUICKLY INSTALLED

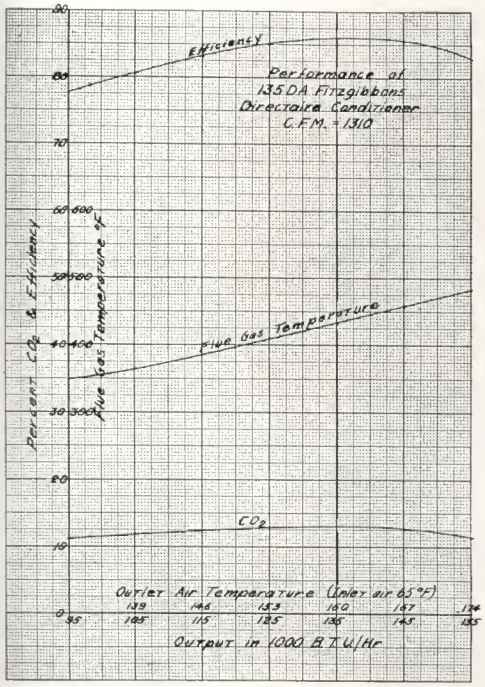
These units are shipped assembled with the inner casing, humidifying equipment and fan control in place.

OIL, GAS OR STOKER FIRED

The construction of the unit permits firing with either an oil burner, gas burner, or automatic stoker. The choice of fuel is your privilege.

HIGHLY EFFICIENT

The design of the unit assures a high overall efficiency as is shown by tests of operation on chart below.



Fitzgibbons "DIRECTAIRE" Conditioner

Highly efficient operation is an outstanding feature of the Fitzgibbons Directaire Conditioner as is shown in the chart above. Low flue gas temperatures, high CO_2 readings and resulting economy far above the average direct fired conditioner mean much when considering fuel cost and first cost.

QUICK TRANSMISSION OF HEAT

When the oil burner, stoker, or gas burner goes into operation a rapid transfer of heat takes place in this steel furnace, thereby eliminating the heating lag so prevalent in many other furnace designs. This insures even room temperature, and quick pick-up of heating load.

QUIET OPERATION

The double inlet squirrel cage type fan designed to operate at slow speeds for maximum air delivery is provided with sound absorbing insulation material to minimize noise. The motor is resilient spring mounted set up in such a way that it will automatically control the belt tension. The motor has a variable pitch adjustable pulley making it possible to reduce the speed of the air delivery as much as 25%.

CONTROLLED HUMIDIFICATION

The humidifier is controlled by the hydro-metric humidifying system so designed and controlled as to prevent an excess of humidity and condensation from forming on the walls and windows of the home. The proper quantity of moisture is, therefore, constantly maintained.

REMOVABLE FILTERS

Filters are of spun glass impregnated with oil, providing a 99% efficiency in dirt and pollen removal with minimum resistance. Easily removed and inexpensively replaced.

EASILY CLEANED

The DIRECTAIRE CONDITIONER is easily cleaned through the large doors making it possible to clean every portion with little effort, and thereby maintain the high efficiency of the conditioner.

ADAPTABLE FOR SUMMER COOLING

The unit is so designed and controlled that circulation of air can be had in the summer time. A compressor and cooling coils can be added to the system for summer operation.

HOW TO GET *complete* INFORMATION

Your Architect, Builder or Heating Contractor undoubtedly knows about the Fitzgibbons Steel Boilers and Boiler-Air Conditioners illustrated and described on the preceding pages, and may have in file our catalogs which give complete details including capacities and dimensions. If not, full details will be gladly furnished by the nearest of the Fitzgibbons branches and representatives listed below. If none of these offices are near your home, write to our General Office in New York City and we will see to it that full information is promptly supplied.

FREE ADVISORY COOPERATION

Our representatives are all thoroughly trained and experienced in all matters pertaining to heating, domestic hot water and air conditioning. Without obligation, they will gladly consult with your Architect, Builder or Heating Contractor, and render every assistance in planning your heating, hot water and air conditioning, and in selecting the proper units to meet and satisfy the requirements of your home.

We will be glad, of course, to answer any question about heating, hot water or air conditioning that you may wish to address to us direct. There is no obligation, so please do not hesitate to write.

BUY THROUGH YOUR LOCAL DEALER

Fitzgibbons Steel Boilers and Boiler-Air Conditioners are sold only through recognized Dealers and Heating Contractors, many of whom have them on display. It is to your advantage to buy through your local dealer, or contractor, who will then be available to service your equipment. If you wish, we will be pleased to give you upon request, the name and address of a reliable dealer located near you.

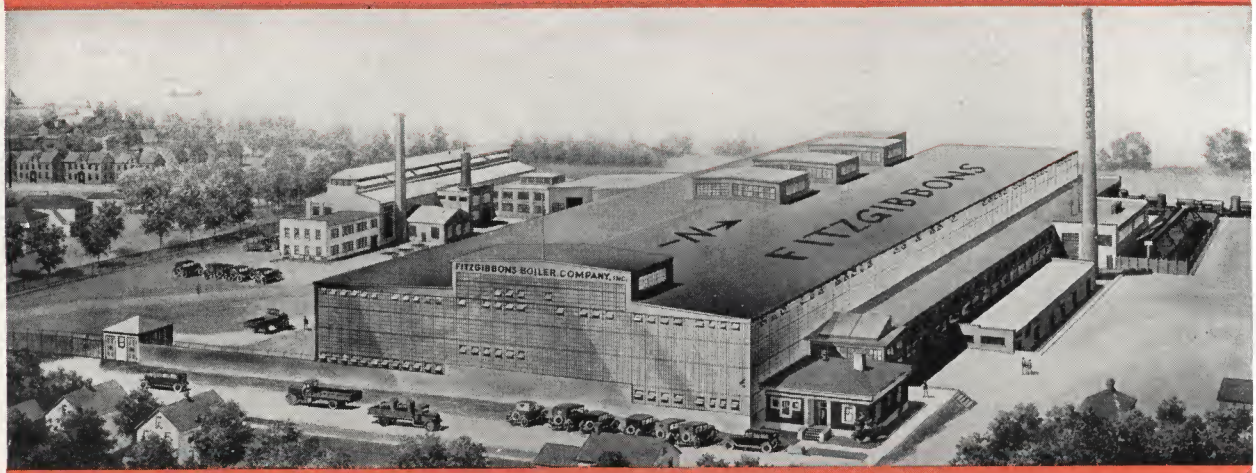
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Fitzgibbons Boiler Company, Inc.

GENERAL OFFICE AND SHOWROOM—ARCHITECTS BUILDING, 101 PARK AVENUE, NEW YORK CITY

TELEPHONE CALEDONIA 5-7800



The FITZGIBBONS factory, Oswego, N. Y., where the experience, the refinements and the perfection of 50 years of steel boiler manufacturing go into FITZGIBBONS BOILERS and BOILER-AIR CONDITIONERS.

PRINTED IN U.S.A.

A MANUFACTURING ACHIEVEMENT BY GOSHEN VENEER CO.

PERMA-WOOD



WALNUT

Now

YOU CAN HAVE WOOD PANELING OF BEAUTY AND CHARACTER *at low cost!*

PRIMA VERA



PERMA-WOOD *Pre-Finished* PANELS

COME TO YOU AS COMPLETELY FINISHED AS A FINE PIECE OF FURNITURE

Even Small Home Budgets PERMIT HAVING PERMA-WOOD PANELED ROOMS

Paneling has long been recognized as the ultimate in beautiful walls. Now the manufacturers of Perma-Wood produce this traditional beauty by the same modern process used in airplane construction . . . thus giving permanent wood, with the richness and beauty that only real wood can have . . . The original cost of a Perma-Wood paneled room is the last cost . . . Perma-Wood paneling can be obtained for as low as $180.00 for the average size room (12′x15′). These panels are stained and finished at the factory — eliminating the high cost of hand finishing that generally accompanies paneling . . . Because Perma-Wood comes to you in dimension sizes to fit the design chosen, your own carpenter can apply it with no unnecessary cutting waste . . . Panel designs and sizes are shown on the opposite page. These panels may be obtained in any desired wood. Six of the most popular colors and designs are shown.

MAPLE



OAK



PERMA-WOOD



101 (LEFT)

Using 2—32″ x 40″ units and 1—32″ x 20″ unit in each vertical section . . . All batten strips 2″ wide.



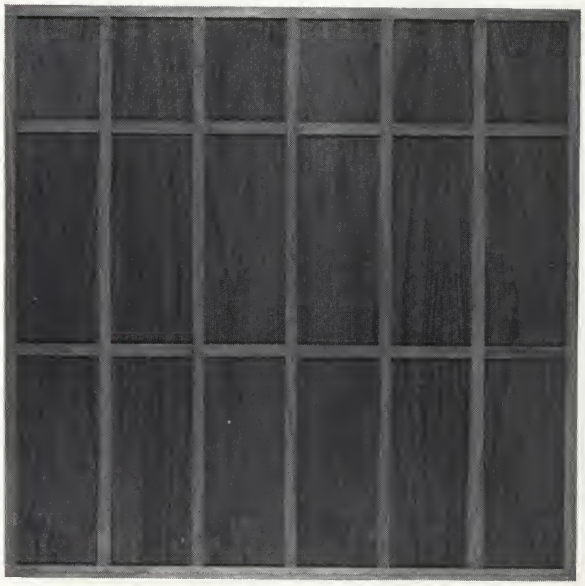
(RIGHT) **102**

Using 1—16″ x 64″ unit and 2—16″ x 20″ units in each vertical section.



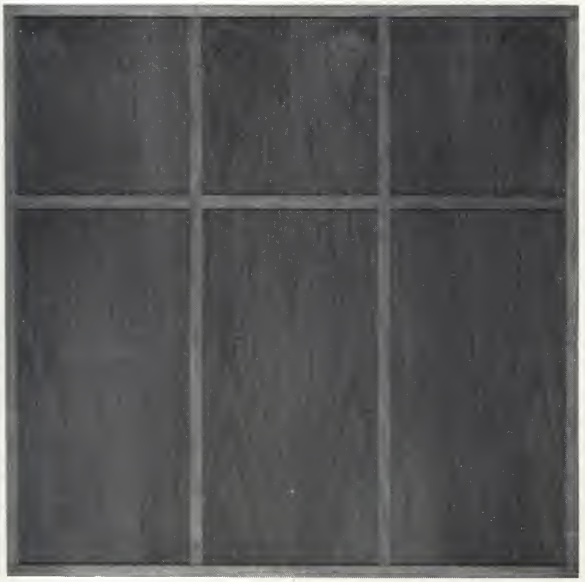
103 (LEFT)

Using 1—32″ x 64″ unit and 2—32″ x 20″ units in each vertical section.



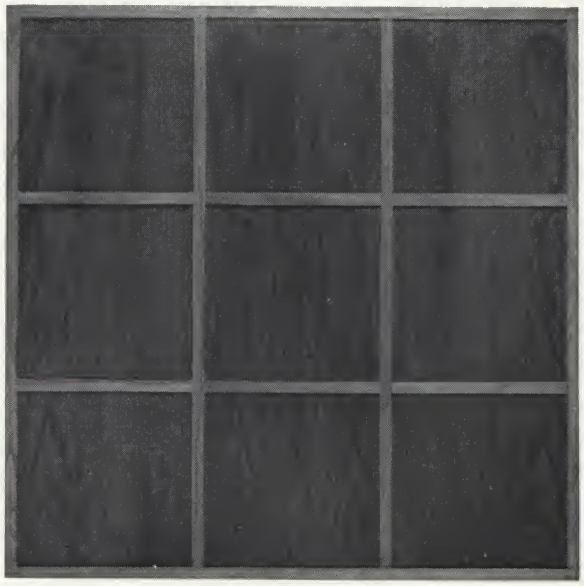
(RIGHT) **104**

Using 2—16″ x 40″ units and 1—16″ x 20″ unit in each vertical section.



105 (LEFT)

Using 1—32″ x 64″ unit and 1—32″ x 32″ unit in each vertical section.



(RIGHT) **106**

This design particularly suited for ceilings. Using 32″ square panels.



BIRCH



MAHOGANY

PERMA-WOOD WAS CREATED FROM FORTY YEARS OF WOODWORKING EXPERIENCE

The woods used in Perma-Wood are selected for their popularity and perfection.

These expertly selected woods are then cut to produce panels of rarest beauty.

Perma-Wood panels are glued in hot plate presses, the most modern construction method available.

RESISTS MOISTURE •• TERMITES

They resist heat, cold, moisture, mould and termites. The lightest Perma-Wood is equal in strength to a one-inch thickness of oak, and will give many generations of lasting satisfaction.

Each type of wood is treated to glorify its character. After the Perma-Wood finishing process, the wondrous beauty of your wood panel is preserved. Your Perma-Wood paneled walls are as easily maintained through the years as the wood in a fine piece of furniture.

• HOW TO OBTAIN PERMA-WOOD SERVICE

The manufacturers of Perma-Wood maintain a staff of field representatives who will call on you and show you the many types of woods and designs available, and explain the many uses of Perma-Wood For immediate attention, or further information, please write.

GOSHEN VENEER COMPANY

Wall Panel Division

GOSHEN, INDIANA





UPSTAIRS.. DOWNSTAIRS.. *and in your lady's* CHAMBER



Anthracite Heat

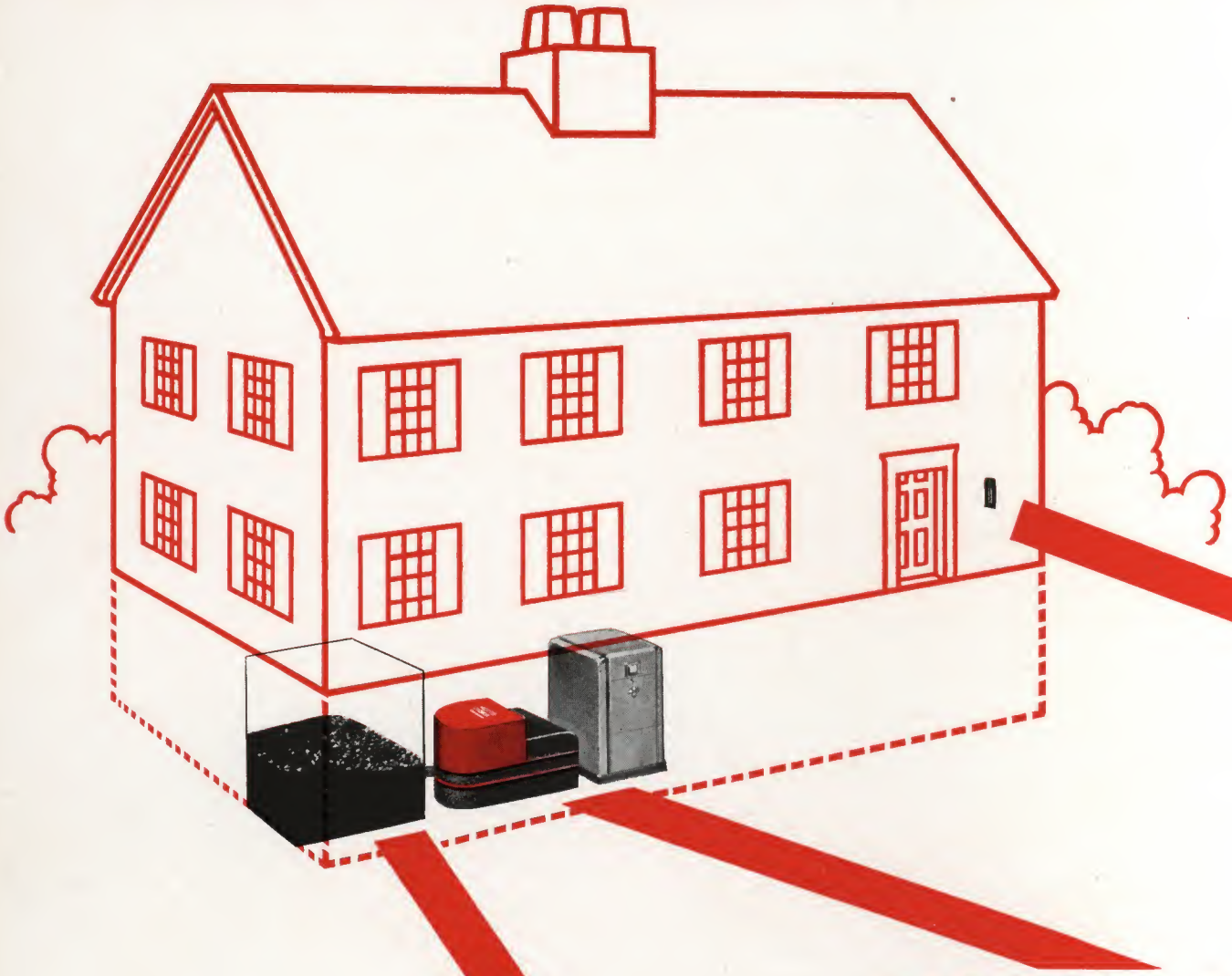
MADE
COMPLETELY AUTOMATIC
BY

MOTOR STOKER

IS COMFORTABLE, CLEAN,
AND
ECONOMICAL



For Better Living



CHEAPER, BETTER HEAT

Automatic anthracite heat is the most modern, most effective, and most economical heat in the world. It will save at least one-third of your fuel bill because MOTORSTOKOR is built to burn the cheaper sizes of anthracite (buckwheat or rice). Initial cost is no greater than that of other good automatic heaters.

CAREFREE CONVE

Automatic anthracite heat will relie
heating worries. Beginning in you
smooth-running steel worm will carry
is needed for constant, even warmth,
There it will feed the fire as it should
the bottom up—burning all gases
heat from a radiant fuel bed. Then it
ally deposit the ashes in clean, sea
or a pit, depending upon the arrang
sire. No dirt, no dust, no fumes!

BUILD YOUR HOME AROUND MOTORSTOKOR

Begin in the blueprint-stage to banish heating problems from your house. Plan to have the clean, effortless automatic heat that MOTORSTOKOR and anthracite make possible. Resolve now that you'll never tend furnace, that a bin-feed MOTORSTOKOR will carry the coal from bin to furnace and remove the ashes — at the command of a thermostat. Look ahead to the heating joy that anthracite, the most economical and most comfortable fuel will give when scientifically handled by MOTORSTOKOR. Also, count on MOTORSTOKOR heating endless quantities of domestic water, even through the summer months.

IENCE

you of all
al bin, its
coal, as it
he furnace.
fed—from
an intense
automatic-
containers,
ent you de-

UPSTAIRS AND DOWNSTAIRS HEAT

As You Need It

The thermostat will tell your MOTORSTOKOR when to increase heat, when to decrease it. Automatically, it will cling to the desired comfort level. And since MOTORSTOKOR keeps a fire all winter long, unlike all-on or all-off automatic fuels, temperatures are more uniform from floor to ceiling. This means comfort in all parts of the house.

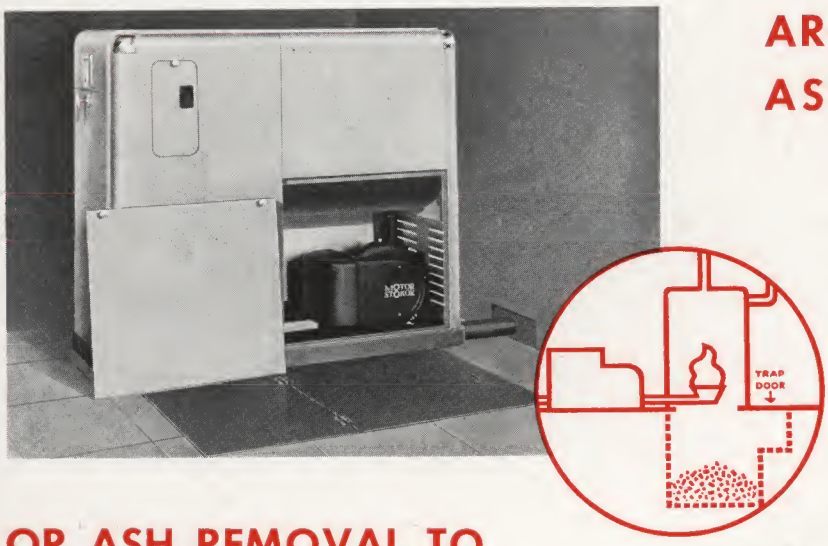
. . . AND REMEMBER

that MOTORSTOKOR can be quickly installed in houses already built, to supply even, automatic heat for warm air, hot water, steam, vapor, or air conditioning systems.



PLAN NOW TO LET MOTORSTOKOR TEND YOUR FURNACE

IN EITHER OF THESE TWO WAYS

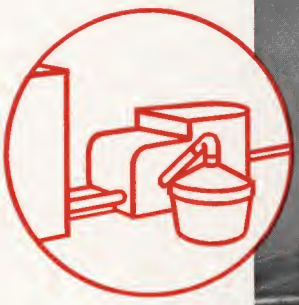


ARCHITECTS CAN PLAN PIT ASH REMOVAL *WHEREVER POSSIBLE*

The large, closed-pit installation enables you to have the simplest arrangement for your basement. You can practically forget the ashes, as they need be removed only once or twice a year.

OR ASH REMOVAL TO SEALED CONTAINERS

If you prefer weekly ash removal, or if soil conditions prevent pitting, a MOTORSTOKOR bin feed with automatic ash removal to these light, sealed containers will do the trick well. Your local MOTORSTOKOR dealer will gladly provide detailed drawings showing all measurements required.





For Automatic Heat Counsel, Call in your MOTORSTOKOR Dealer

Your MOTORSTOKOR dealer will gladly consult with you, your architect, and your builder on a MOTORSTOKOR installation for your home. He is equipped by experience and factory training to give you practical advice, drawings, measurements, and elevations—without obligation to you. Look him up in your classified phone book or write for further information to the manufacturer.

MOTOR STOKOR

MOTORSTOKOR DIVISION, HERSHEY MACHINE & FOUNDRY CO., MANHEIM, PA.

RUBBER TILE FLOORING

Hood Rubber Tile— For Home Use

When you install Hood Rubber Tiling, the result is a permanent, custom-built floor, designed particularly for a certain room or rooms—not in any sense a floor covering which will have to be replaced after a few years. The tiles are made in so many different sizes, shapes and colors that intelligent planning makes it easy to design individual, distinctive floors for any room in new or old houses.

Hood Rubber Tile is not only extremely durable, but has a wonderfully smooth, non-porous surface, which makes it unusually easy to keep clean and bright because dirt does not grind in but stays on top of the floor. Surface marks made by cigarette burns, ink, and many other liquids may be removed without difficulty and leave no permanent discoloration. Its new, live rubber construction lets you walk in cushioned comfort, and reduces the nerve-racking clatter of footsteps.

Flooring contractors install Hood Rubber Tile with special adhesives over either suspended concrete or wood floors. There are three standard thicknesses, 1/4", 3/16", and 1/8", but the 1/8" is more often used for residential work than the heavier grades. The colors of Hood Tile run through the entire thickness of the material. Unquestionably, Hood Tiles will greatly outwear equal thicknesses of other resilient floors.





Hood Tiling is not an extravagant floor in any sense of the word. Its initial cost is only slightly more than that of less desirable materials, and the absence of refinishing expense combined with low cost of cleaning and maintenance make it decidedly economical in the long run.

Sanitary Cove Base and Accessories

Hood manufactures Rubber Cove Base which replaces old-fashioned wooden baseboards and eliminates the cost and



bother of painting and repainting such boards. Hood Cove Base is generously curved at the point where floor and wall meet. This makes cleaning still easier, because when Cove Base is installed there are no unsanitary right angle corners where dirt and germs may collect. Hood Cove Base is made in heights varying from two to eight inches and in the same colors as the Flooring. Usually the color of Cove Base is the same as the Border of the floor. Specially made fittings for carrying Cove Base around exterior and interior corners are available for each variety of base.

Other molded rubber flooring accessories include Thresholds, Stair Treads in various sizes with nosing that fits over the edge of the steps, Plinth Blocks, and several caps and wall corner fittings for Rubber Tile Wainscot work.

Rooms in Which Hood Rubber Tile May Be Used

While Hood flooring frequently is installed in Living Rooms and Dining Rooms, its more common use is for Halls, Kitchens, Pantries, Breakfast Rooms, Bathrooms, Sun Rooms, Dens, Vestibules, and Nurseries. Rugs may be used, if desired, in rooms floored with Hood Rubber Flooring, just as with other types of floors.

Hood Rubber Tile should not be installed in Basements, where dampness exists, or on open porches.

Designs and Colors

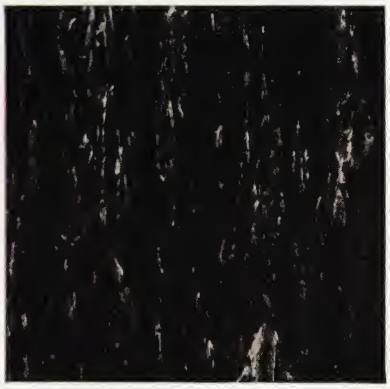
On the following pages are shown the standard colors of marbleized Hood Rubber Tile. In addition, there are fifteen plain pastel colors which are frequently used for inset work and feature strips as well as for entire floors. A few of the unlimited design combinations appear on Pages 6 and 7. Standard sizes of tile are listed at top of page 7. Borders and feature strips come in any desired widths up to 36″, and many other sizes may be obtained at slight extra cost.

Specially designed insets (see upper photograph on this page) in all sorts of shapes and colors may be designed and built into Hood Rubber floors. Hood Rubber Tile, more readily than any other Flooring material, lends itself to the expression of the Home Owner's individuality.

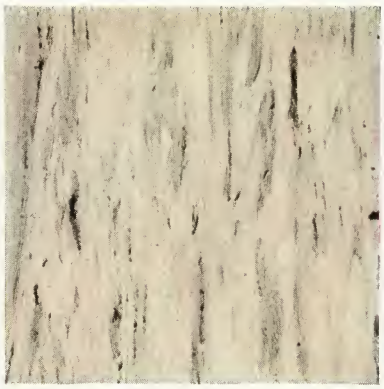


HOOD RUBBER TILE FLOORING

Shown below and on the front cover are actual colors offered in Hood Rubber Tile. From this color assortment, proper combinations may be selected to harmonize with the decorative scheme of any interior. The colors on the front cover are No. 254, Red Gold Black, No. 257, Ivory Paisley, and No. 258, Light Green Mixture.



201 Black White



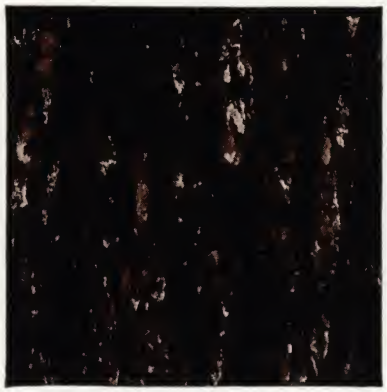
202 White Black



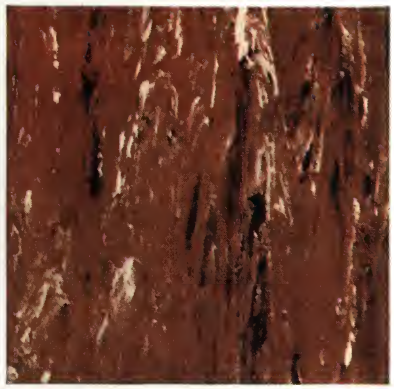
203 Dark Gray Mixture



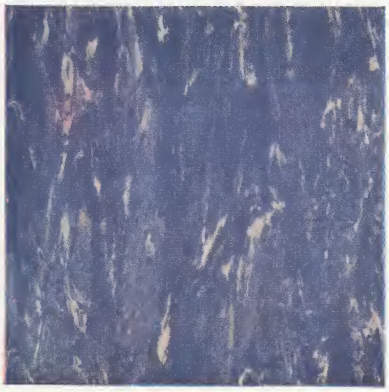
204 Napoleon Gray



205 Black Mixture



206 Red Mixture



207 Blue White



208 White Blue



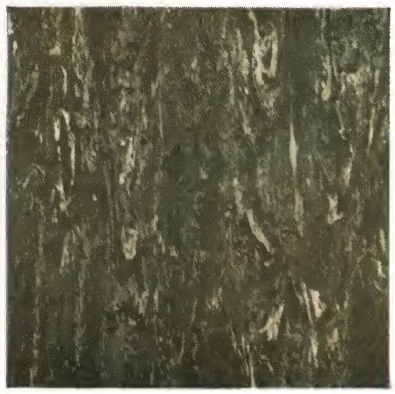
209 Tennessee Pink



210 Dark Verde Antique



211 Light Verde Antique



212 Green White

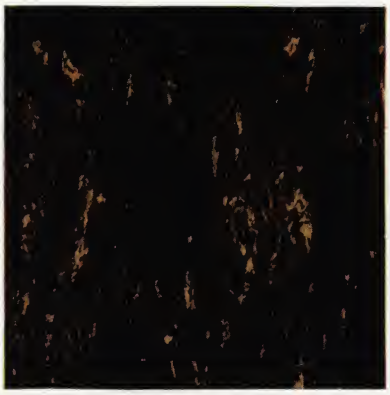
RUBBER TILE FLOORING

HOOD

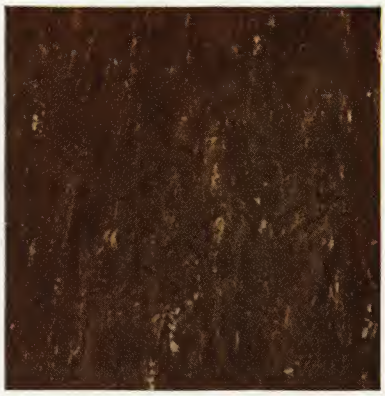
There are also four other standard colors not shown below, but which are reproduced in the designs on Pages 6 and 7. These are No. 240-A, Light Brown Mixture in Design No. 2; No. 250-A, Slate Green, the dark green color in Design No. 8; No. 101, Plain Black, the border of Design No. 5-A; and No. 227, Tan Mixture, the tan color in Design No. 3. In addition to these mottled colors, there are available 15 plain colors, samples of which we will be glad to send you upon request.



213 White Green



214 Black Gold



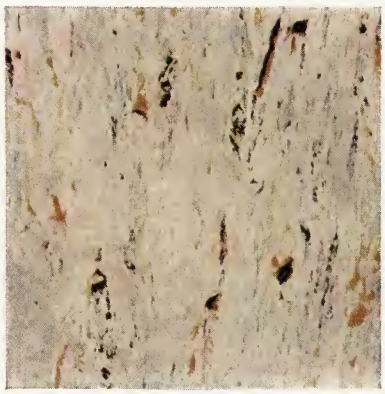
218 Walnut Mixture



219 Cream Mixture



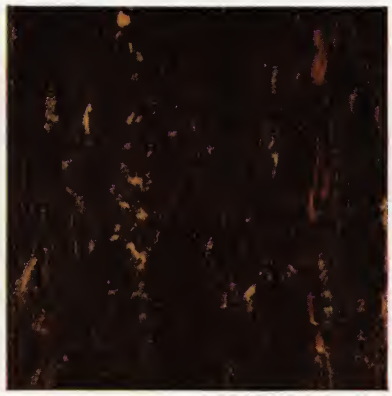
255 Blue Blue



231 Ivory Mixture



239A Dark Brown Mixture



247 Morocco



256 Red Paisley



249A Black Green



243 Medium Gray Mixture



253 Black Red Gold

These panels show a few of the unlimited design possibilities which are available with Hood Rubber Tile.





DESIGN NO. 2
Field: Large Squares, No. 240A; Small Squares, No. 101
Oblong: No. 239A
Border: No. 240A



DESIGN NO. 3
Field: Oblongs No. 227 and No. 254; Squares No. 253
Border: No. 253
Feature Strips: No. 254 and No. 227



DESIGN NO. 4
Field and Border: No. 255
Feature Strips: No. 101 and No. 204

RUBBER TILE FLOORING

HOOD

Standard Tile sizes are 4″x 4″, 6″x 6″, 9″x 9″, 12″x 12″, 6″x 12″ and 9″x 18″. Other sizes at slight extra cost.

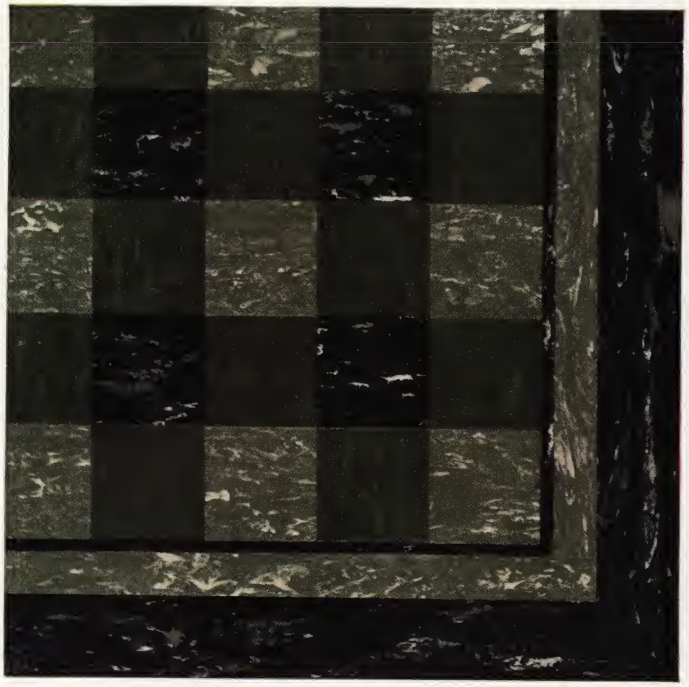


DESIGN NO. 5-A
Field: Large Squares, No. 247 and No. 257
Small Squares, No. 256
Border: No. 101
Feature Strip: No. 122





DESIGN NO. 7
Field: Oblongs No. 218 and No. 219; Squares No. 247
Border: No. 247
Feature Strips: No. 247, No. 219 and No. 218



DESIGN NO. 8
Field: No. 210, No. 212 and No. 250A
Border: No. 210
Feature Strips: No. 210 and No. 212

HOOD RUBBER TILE FLOORING



How to Obtain Hood Rubber Tile

Hood Tiling is sold through Flooring Contractors skilled in its proper installation. If your architect or builder does not know of a capable Floorman in your locality, write us for any additional information desired or for the name of the nearest Hood dealer. Such dealers are always glad to show samples of the different colors and to work with owners, architects, decorators or builders in connection with any design or construction problems that arise.

The use of Hood Tile is by no means confined to the home. For many years it has rendered efficient and economical service in all types of non-residential buildings, both public and private. New Hood installations for such buildings are definitely on the increase.

HOOD MUROGOMME WALL COVERING

Murogomme is a Sanitary Rubber Wall material applied to plaster or other smooth, dry wall surfaces to form a permanent wainscot or complete wall covering. It comes in 36″ or 42″ widths and in lengths up to 25 yds. Murogomme eliminates the cost of painting and papering, and prevents damage to plaster. Its colorful surface is waterproof, non-absorbent and extremely easy to clean. There is a wide variety of Plain and polychrome effects, some of which are like Hood Tiling colors (see colors 201, 204, 211, 219, 231, 256 and 258 on Pages 4, 5, and front cover). Murogomme may properly be used in any room, but is particularly suitable for bathroom, kitchen, and corridor walls. Suitable Rubber Wainscot Cap and other desirable accessories are available in colors matching those of Murogomme. Panel effects, using chromium plated metal trim available in many shapes and sizes, are frequently planned in modern interiors. Provided old walls are in good condition, Murogomme is just as effective in old houses as in new construction. Hood Flooring contractors are competent appliers of Murogomme. Its installation, while not difficult, requires a knowledge of proper methods and the use of the necessary tools. The cost of Murogomme is remarkably low, and it soon pays for itself through savings in refinishing and replacing less modern and permanent wall coverings.

Hood Rubber Co., Inc. • Tiling Division • Watertown, Mass.



The Inside Story of IRON FIREMAN

AUTOMATIC ANTHRACITE FIRING

Do you know of any other heating equipment that can do as much for you as Iron Fireman? This mechanical marvel not only provides the most comfortable, wholesome kind of heat, but also lifts the whole burden of furnace worries from your shoulders.



Iron Fireman lets you sleep later every morning . . . you needn't get up to regulate the draft or refuel the furnace. Its Automatic Syncrostat control system has the house warm by the time you get up. It keeps the temperature in your home steady all day, without any attention from you. It saves you the bother of firing your furnace; it keeps the fire properly regulated every minute of the day and night. You can be gone all day without worrying about the condition of the furnace if you have an Iron Fireman on the job.







All these conveniences Iron Fireman gives, *and more!* It gives you the most economical kind of automatic heating known. No wonder that year after year Iron Fireman is the biggest selling automatic coal burner in the world!

Iron Fireman at top of page is spill-over Anthracite model. Ash is deposited in pit beneath burner.

THE MACHINE THAT MADE 

COAL AN AUTOMATIC FUEL

The Inside Story of Iron

Iron Fireman's outstanding performance is the result of "balanced design"—the synchronized functioning of all its well designed and quality built parts, each functioning in unison with the rest of the machine.

It is not enough that a machine be exceptional in one part or have excess strength in another.

Iron Fireman has achieved its record for quiet, economical, continuous operation at low maintenance cost by being right in every part and by coordinating all those parts into one complete, harmonious unit—a finely built and finely balanced machine.

The ash-remover hopper model of the Iron Fireman. This big quarter-ton hopper needs to be filled only occasionally. No other coal handling. Feeds the coal from the hopper and automatically removes the ashes.





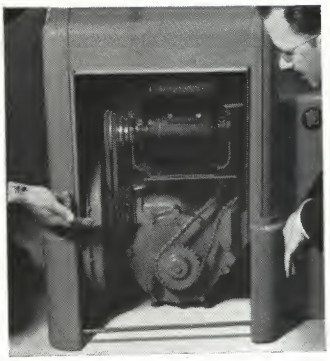
Standard Thermostat

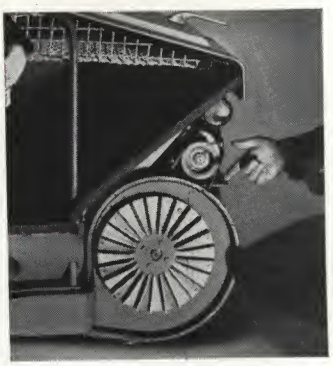
Stoker fires furnace at thermostat's command

This thermostat is continually "feeling" the temperature in the house and sending instructions down to the Iron Fireman in the basement. Whenever the temperature upstairs goes above or below the desired level, the thermostat signals for more or less heat, starting or stopping the burner, as the case may be.

Precision-built transmission feeds coal at a steady rate

The transmission drives the coal conveyor at a constant speed, feeding the coal to the fire at an even rate. It's always in mesh—no gears to shift. Always silent; the gears run in a constant bath of lubricating oil. The gears in the Iron Fireman automatic coal burner are built to the same standards of quality and accuracy as the transmission of a fine automobile.





Radial vane fan

The forced draft that helps Iron Fireman achieve such excellent combustion results is generated by this fan. It is of the radial vane type—quiet and smooth-running. It is a single, compact unit made of pressed steel parts in one balanced rotor.

Automatically removes ash

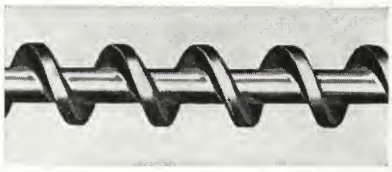
The Iron Fireman Anthracite burner not only feeds coal to the fire but also disposes of the ash! With the ash-remover type, a sturdy conveyor carries ash from the furnace to a dust-tight enclosure, where the ash is dropped into handy containers. With the spill-over type, the ash is deposited in an under-floor pit.



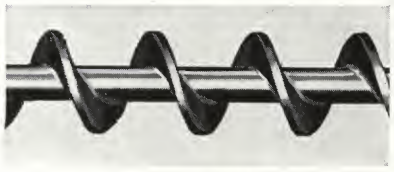
Fireman's Superiority

Easy-flow feed worm . . . most durable conveyor built

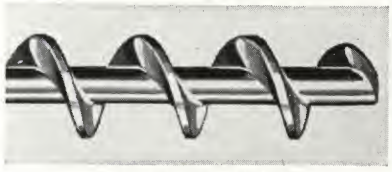
We build into the Iron Fireman Anthracite burner the strongest, longest-wearing conveyor ever devised for firing equipment. Iron Fireman research developed it. This "Easy-Flow" feed worm is made by wrapping a bar of cold-drawn alloy steel around a steel shaft, and then fusing them into one solid piece. The conveyor has three sections. The small flights on the metering section measure out the coal in the hopper or bin. The relatively small amount of coal picked up by the metering section has plenty of room to loosen up when it passes through the wider flights of the conveying section. The tip of the conveyor is made of special chrome steel, developed for its high resistance to heat, abrasion and corrosion.



METERING SECTION



CONVEYING SECTION



CHROME-STEEL FIRE TIP



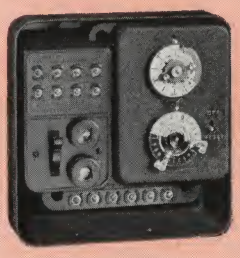
METERING OR "PICK UP" SECTION | CONVEYING SECTION | RETORT SECTION WITH FIRE TIP

Scientifically-engineered installation in your furnace



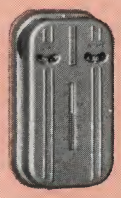
Iron Fireman has developed special installation technics based on more years of experience than possessed by any other manufacturer of automatic coal burners. A special nationwide engineering organization has the sole duty of working with dealers for the purpose of seeing that Iron Fireman burners are correctly installed and performing perfectly.

SYNCROSTAT Control System



SYNCROSTAT (cover removed)

Greatest control achievement in 10 years! Gives you completely automatic, dependable temperature control 24 hours a day. Every evening at a certain time — whenever you say — it automatically lowers the temperature for the night. In the morning it raises it again to daytime level—*before you get up.* All day long it holds the temperature in your home *uniformly steady* at the desired level without your even giving it a thought.



DAY AND NIGHT THERMOSTAT

You set the Syncrostat day and night controls *just once* at the beginning of winter and that's all. From then on they keep the temperature in your home just right without any attention from you.

Standard Control Systems

Iron Fireman's standard control system is similar to the Syncrostat system, except that it does not make the automatic change from day to night temperature and back again. It keeps house temperature uniformly steady, but thermostat must be hand-set whenever a temperature change is desired, as at night.

HEAT LIMIT CONTROLS

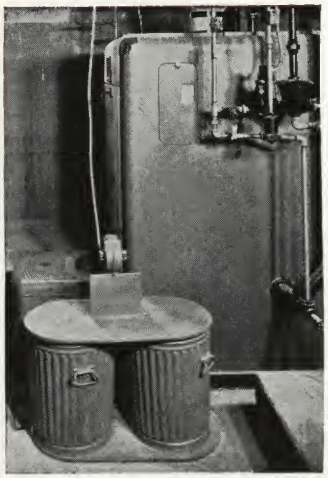
. . . for Steam Hot Water or Warm Air

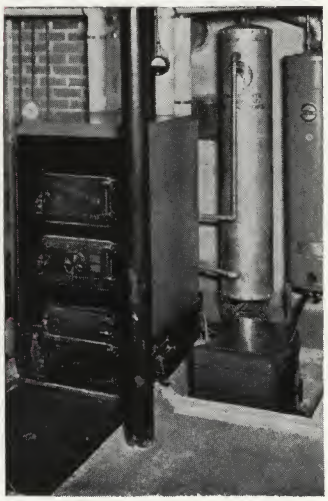


Here is another wonderful feature of Iron Fireman's *Heatmeter* control systems. The heat limit control keeps boiler or furnace from exceeding its most efficient temperature or pressure level. This means added economy, for it eliminates the fuel waste that comes from overheating.

Hot water regulator illustrated. Pressure regulator and furnace regulator also available.

No Coal Handling...Ash





You need never see your coal!

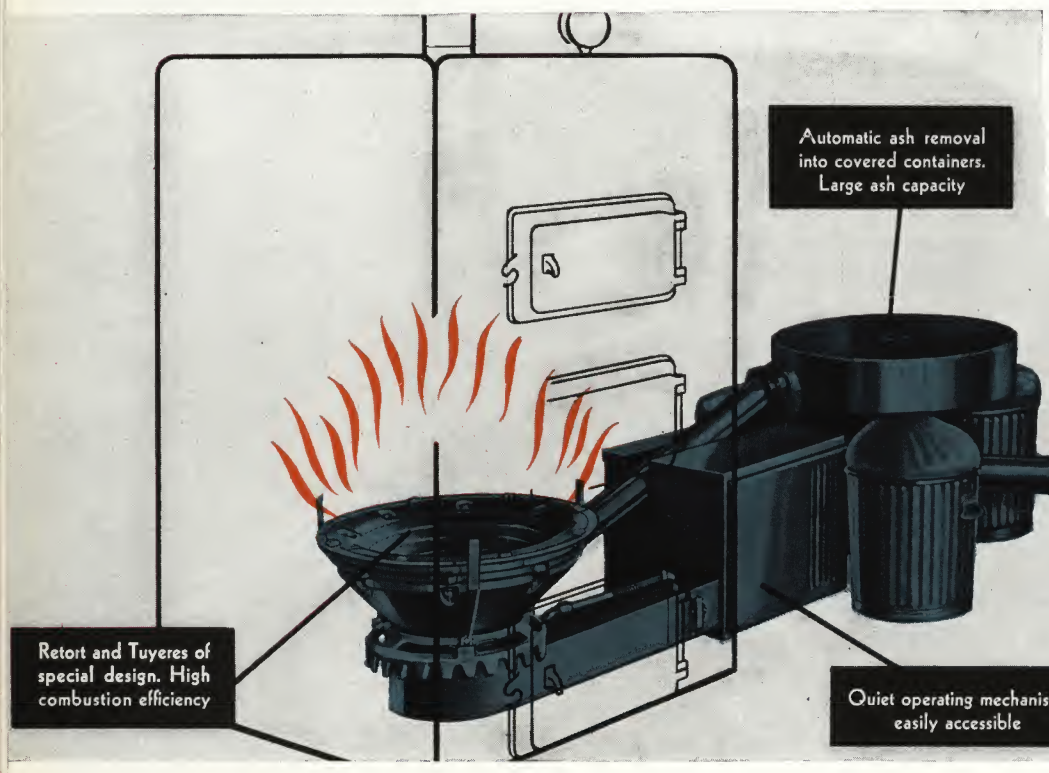
Here is convenience par excellence.

You have your coal dumped into your bin. From then on, the Iron Fireman Anthracite burner takes over the job.

Iron Fireman picks up the coal in the bin, and conveys it to the fire as needed. As combustion is completed and ash is created, the ash is automatically disposed of.

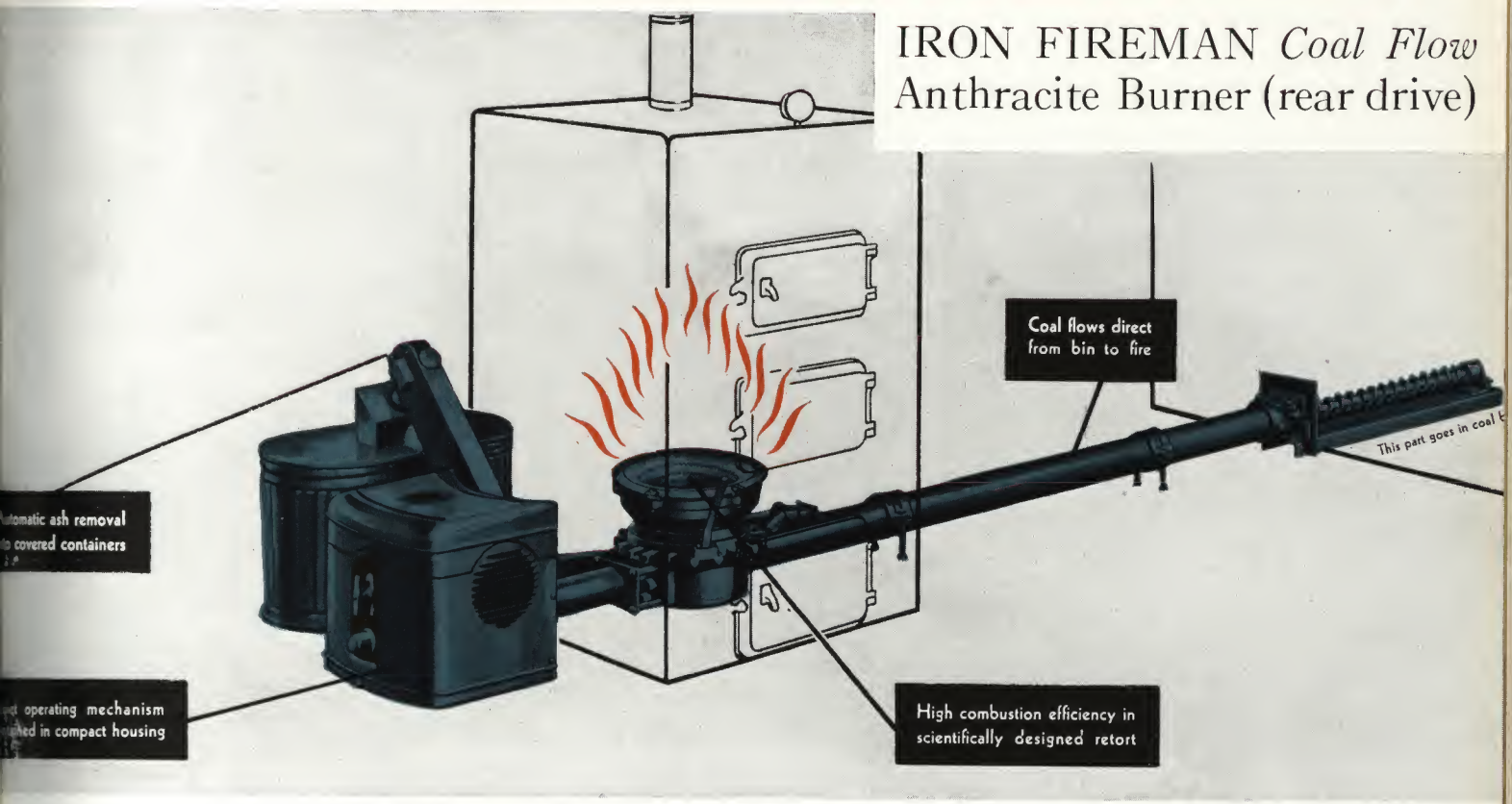
No coal handling for you . . . in fact, there is no coal in sight at any time. The conveyor tube can be put in above or below the basement floor, whichever you desire.

Installation can be made, too, from any position in relation to the furnace or boiler—from the front, side or at an angle.



IRON FIREMAN *Coal*
Anthracite Burner (front

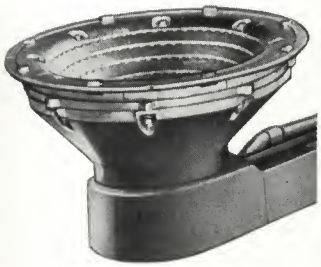
Automatically Removed



Spill-over type gaining in favor . . . several months' accumulation of ash deposited in pit under the floor

All Iron Fireman Anthracite burners are available with two types of retorts: (1) the ash-removal type, illustrated in the large pictures, and (2) the ash-pit type, shown in the small photograph below.

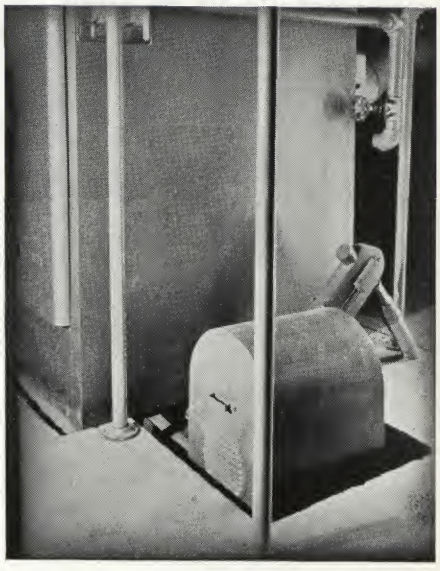
The ash-pit stoker has a spill-over retort. Instead of being conveyed to containers as with the standard type of anthracite stoker, the ash falls into a pit under the floor.



Ash-pit Type of Retort

Depending on the size of the pit, several weeks' or months' accumulation of ash may be allowed to pile up in the pit before removal.

With either type of Iron Fireman Anthracite burner, the ash may be removed easily and cleanly.



The new Coal Flow installed in a Pennsylvania home. The ashes are dropped into a large pit at the right of the stoker outside of the boiler.



How the famous IRON FIREMAN *fire has revolutionized home heating*

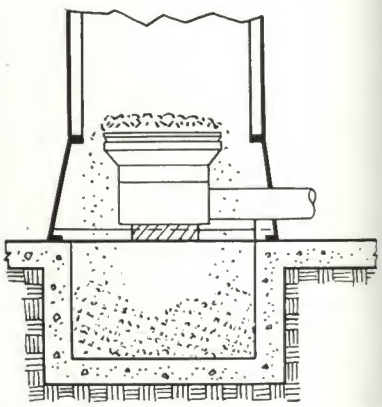
The clean, hot fire illustrated on these pages is the basis of Iron Fireman's superiority. The firing efficiency of any heating equipment is indicated by the kind of fire it creates. And Iron Fireman's superbly efficient firebed helps to make its Anthracite Burner the world's outstanding heating value.

Iron Fireman-fired anthracite makes a different type of fire than you've ever seen before. It is clear, bright, intensely hot, because Iron Fireman achieves scientific coal carburation.

Iron Fireman's forced underfiring process extracts every possible unit of heat from the coal. This is the way it's done:

Scientific *forced underfiring*

Green coal is slowly conveyed by the easy-flow revolving worm (like the feed screw in your kitchen food-chopper) to the retort in your furnace or boiler. Here the coal is forced upward, and as it approaches the fire, it is gradually heated. The more volatile gases are distilled off, and as they pass upward through the incandescent fuel bed, are ignited, consumed and turned into useful heat. Meanwhile, the solid residue, from which the volatile gases have been dis-



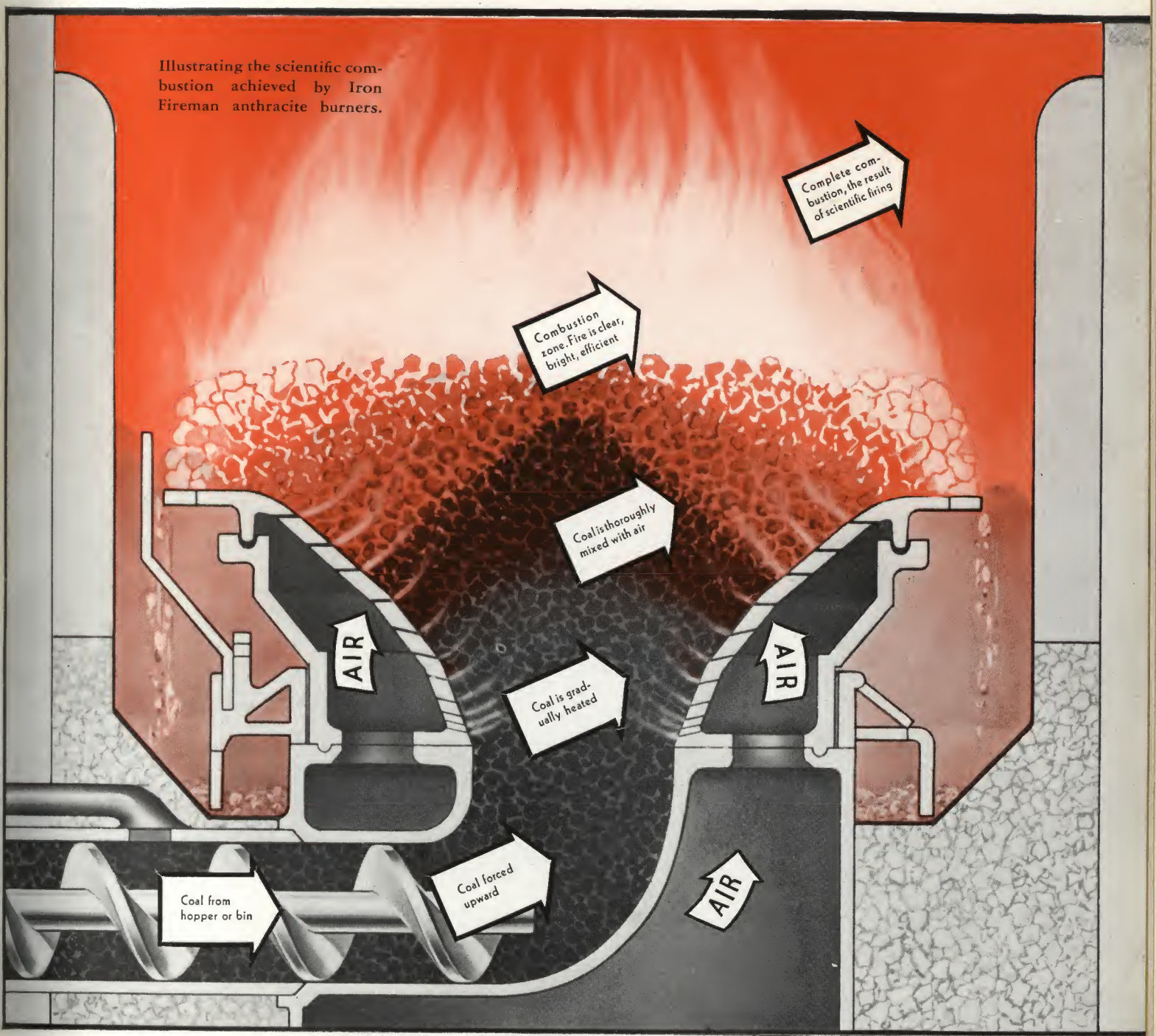
Cross-section diagram illustrating Iron Fireman "spill-over" type anthracite burner. Ash falls into a pit under the boiler and is removed periodically through an air-tight ash pit door in the floor adjacent to the boiler.

tilled, is forced upward into the fire, where it is completely consumed, leaving nothing but non-combustible ash residue which is either conveyed automatically to ash cans or deposited in an easily cleaned pit.

Ideal automatic home heating

Iron Fireman's anthracite firebed is ever-glowing. It provides the smoothest heating obtainable. The firebed responds quickly to instructions from the thermostatic controls for varying degrees of heat. Constant flow of gentle warmth from Iron Fireman's firebed assures even distribution of heat throughout the house. Floors and walls are saturated in warmth.

So you can understand why people tell us that they can actually "feel" the difference in an Iron Fireman-heated house. The warmth is more "solid." The whole house is warm, not just the air in the rooms. No wonder Iron Fireman home heating is considered as the ideal!



Illustrating the scientific combustion achieved by Iron Fireman anthracite burners.

Iron Fireman Makes Luxurious Automatic Heating Possible for You

Formerly, the only kind of automatic heating available was far too costly for the majority of homes. Only the expensive fuels—gas and oil—were automatic in those days. Then came Iron Fireman—the machine that first made *coal* an automatic fuel! What a wonderful achievement it was, opening the door to automatic heating to many who could not otherwise enjoy its advantages.

Iron Fireman gives you all these extra safeguards

PRECISION CONSTRUCTION. Built to precision measurements. Iron Fireman measurements are repeatedly checked by accurate gauges which are checked against the famous Johannson gauges, world standard of accuracy.

NEVER AN ORPHAN. Were you ever left with an "orphan" machine because the company that made it went out of business? Iron Fireman is a strong, responsible company with an assured future and an established record of success in making automatic coal burners.

SOUND ENGINEERING. No wonder Iron Fireman is the most dependable, efficient automatic coal burner made! It is engineered by the most experienced staff of heating engineers in the industry. Their achievements are made possible because Iron Fireman maintains the world's largest and most completely equipped automatic coal firing research laboratories.

LONG LIFE. Most of the first Iron Fireman burners, built 15 and 16 years ago, are still "going strong." Later models are much improved and will give even longer service.

CONTINUING RESPONSIBILITY. When you buy an Iron Fireman you get more than a machine—you get a continuing heating service. A staff of field engineers is maintained to help us and other Iron Fireman dealers see to it that every machine installed continues to run as it should.

PROPER INSTALLATION. Iron Fireman has worked out ideal installation methods, based on years of experience with every type of furnace and boiler. Our installation men are factory trained to make satisfactory installations in every type and size of heating plant.

LOWEST UPKEEP COST. Iron Fireman costs less to own, in the long run. Lasts longer; fewer repairs; lower operating cost.

See Your Dealer TODAY... *less than $10 a month buys an Iron Fireman*

The day you move into your new home . . . have it warm and comfortable with Iron Fireman firing. Select your Iron Fireman now, and have its purchase price included in the financing of the house itself. In that way you will spread the cost of the Iron Fireman over the entire financing period of the house . . . bringing the monthly payments on your Iron Fireman down to the small sum of, say, three or four dollars a month.

Even if you purchase your Iron Fireman outright, on a separate financing plan, the monthly payments will in most cases be less than $10 a month. So, you see, it is easy to own an Iron Fireman . . . easy to provide your family with its many benefits.

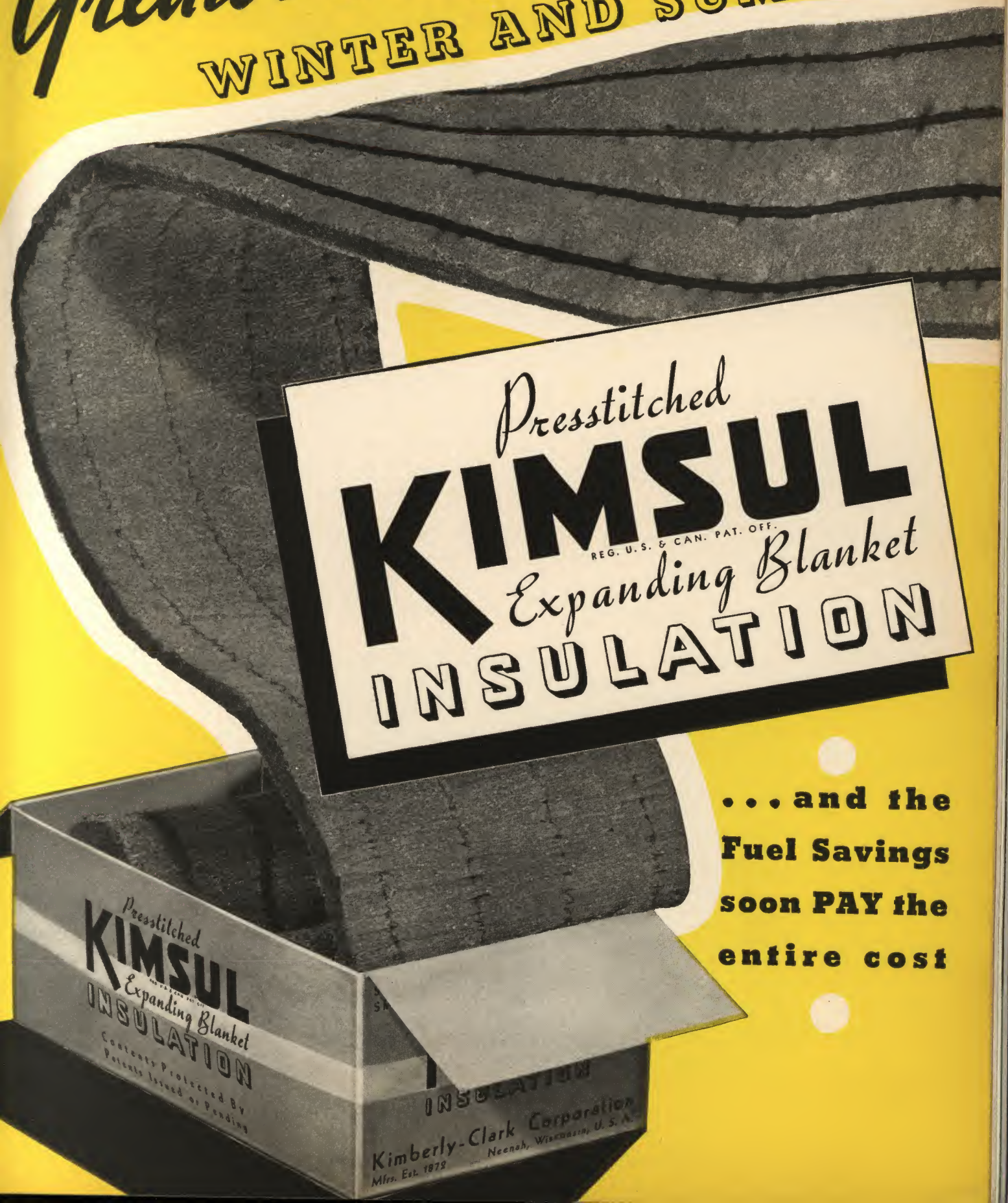


IRON FIREMAN
Manufacturing Company
Portland, Oregon Cleveland, Ohio
Toronto, Canada



Greater comfort . . .

WINTER AND SUMMER



. . . and the Fuel Savings soon PAY the entire cost

Here's one investment you'll

Kimsul brings the cost of good insulation within the reach of every home . . .



In time, even the best roofs may need repairing . . . or replacing.



Furniture often goes out of style before it is outworn.



Age and use make repair and replacement of plumbing fixtures desirable or necessary.

But good insulation, such as Kimsul, if properly installed, doesn't cost anything to maintain . . . instead, it pays yearly dividends in comfort and in fuel savings.

Of all materials entering into the construction of your home, insulation probably offers the most lasting satisfaction . . . the greatest assurance that on some future day you won't say, "If I had my house to build over again, here's another thing I'd do differently."

For good insulation, properly installed, isn't like plumbing or furniture, which may go out of style before it is outworn. Neither is it like a heating plant, an air-conditioning system or a roof, subject to the expense of reconditioning and, sometimes, replacement.

Granting, of course, that you have made a wise selection . . . insulation will give you no reminders of its presence other than the pleasant coolness of your home during a hot summer and the comfortable warmth of it during long winter stretches.

So, if you are building, don't fail to insulate! But choose your insulation with care. For while roofs and heating systems can be repaired or replaced, insulation is sealed up in your walls where its replacement is a very expensive undertaking.



Selecting Insulation Wisely

Selecting insulation which will give you complete and permanent satisfaction requires the use of judgment. Basically any material which is a non-conductor of heat can be called "insulation" but the variations in the comparative efficiencies among so-called "non-conductors" is great!

The Fuel Saved Soon Pays the Cost of

Copyright 1939, Kimberly-Clark Corp.

never regret





There is an easy way, however, to identify good insulating materials. All have one property in common . . . *a high percentage of still air spaces.* Thus, in tropical countries huts are thatched with palm fronds because they have proved an effective barrier against the sun's heat. In the Antarctic, penguins enjoy sub-zero temperatures because their down conserves bodily warmth.

Still air spaces are nature's barrier to heat transmission. The percentage of them present in any material . . . rather than great thickness or extreme weight . . . are what determines its insulating efficiency.

Other Materials Bow to Wood Fibres

In the quest for materials which would provide still air spaces in a form practical for building insulation, all types of animal, vegetable and mineral substances have been tested.

Of them all, wood fibres possess the most practical qualifications. They are clean, odorless and unlimited in supply. Good insulation can be made from them cheaply enough to meet every home-builder's budget.

Hence, it is only natural that Kimberly-Clark should assume a leader's role in the field of insulation. As one of the largest and oldest concerns engaged in developing and manufacturing wood fibre products, it has the experience, organization, and facilities needed to develop wood fibre insulation of unique excellence.

In Kimsul it evolved a material which deserves the recognition accorded it.

Two Kimsul Developments are Revolutionizing Building Insulation

In making Kimsul, research and experiment did not stop with a wood fibre insulation which met usual requirements. On the contrary, it continued until a new and better form had been perfected . . . *Presstitched KIMSUL in Expandable Blankets,* which reduces every cost connected with insulating from shipping to final installation in your home.

1

Expandability . . . a unique Kimsul feature . . . greatly speeds installation and noticeably reduces costs.





2

Presstitching . . . another Kimsul development . . . increases efficiency by controlling expansion to its most effective density. Kimsul does not overstretch — it does not sag or settle.

The research and engineering skill Kimberly-Clark has put into Kimsul is most important. Because while all *good* insulation will increase your comfort and cut your fuel bills, Kimsul accomplishes both with substantial *savings* in cost.

As the simplified table at the right shows, Kimsul has been designed to meet the requirements you, your architect, your contractor, and even the man to whom you may sell your home years hence could ask of insulation.

Every INSULATION MATERIAL SHOULD MEET THESE REQUIREMENTS

These factors determine **EFFICIENCY**

These factors determine **PERMANENCE**

These factors determine **COST**

Applicable to Kimsul, this table is equally applicable to all other insulation materials! So, when you study it, ask yourself this question, "What other materials are outstanding not only in Efficiency but in Permanence and Economy as well!"

HOW KIMSUL MEETS THESE REQUIREMENTS

1
Heat blockading power

1. The measure of the heat stopping power of any material is its "K" factor. Kimsul's rating is .27, which is above the average. Actually a home insulated with one inch of Kimsul is better protected against cold and heat than a castle with masonry walls several feet thick.

2
Snugness

2. But mere ability to stop heat isn't enough! Just as the warmest bed clothes won't keep one warm if they are not properly tucked in, so will the best insulation be inefficient if it does not fit snugly. Kimsul is flexible. It can be drawn around corners or tucked behind wires and pipes . . . providing a continuous unbroken blanket of insulation without heat wasting cracks.

3
Thickness

3. Obviously a home in Memphis needs less protection from cold than one in Medicine Hat. To combine maximum comfort with economy, Kimsul is made Commercial, Standard and Double Thickness. The proper thickness for any home is available.

1
Stamina

1. Kimsul resists fire and moisture. It is also treated to resist attacks of vermin and insects. Being made of creped plies of wood fibres that will not shred or sift, the material itself is inherently lasting.

2
Stability

2. Insulation must stay where it belongs. If it packs down, or pulls away from joists, rafters or studding, it creates "transoms" through which heat escapes. Kimsul is "Presstitched" . . . stitched the length of each blanket with rows of strong twine. It does not sag or settle and its thickness remains uniform.

1
Cost of product

1. Per square foot, Kimsul's cost is low.

2
Cost of Installation

2. And: Made in widths to fit snugly between studs and rafters, it eliminates much fitting. Yet, it is quickly and easily cut for spaces of unusual size or shape. Being expandable, it goes up quicker. One man generally can install Kimsul so rapidly that labor costs are lessened.

3
No waste

3. Every bit of Kimsul is usable. Even left over pieces are used for caulking around doors and windows.

4
Shipping and handling charges

4. Kimsul is extremely light. Installed, 1,000 square feet weigh but 129.6 pounds. Being shipped and handled in its compressed form, enough for a moderate sized house can be carried in an automobile. So costs of shipping and handling are also reduced.

How much will Kimsul INCREASE COMFORT?

Every time insulation is mentioned, the phrase "Warmer in winter and cooler in summer" crops up. But, naturally, everyone wants to know . . . "by how much?" One also wants to know how much insulation will cost and how much fuel it will save.

All these are questions which can be answered only in connection with a specific home . . . as the answers vary with the size of the home; its location; heating plant; the type of fuel to be burned, and other individual conditions.

To provide a guide which can be used in estimating the effect of insulation, a theoretical home in Chicago (floor plan and perspective of which are shown below) was used as a basis. And while the figures relating to comfort, fuel savings and cost naturally apply only to that particular house, they give quite a definite idea of what you can expect insulation to do for the home you are planning.

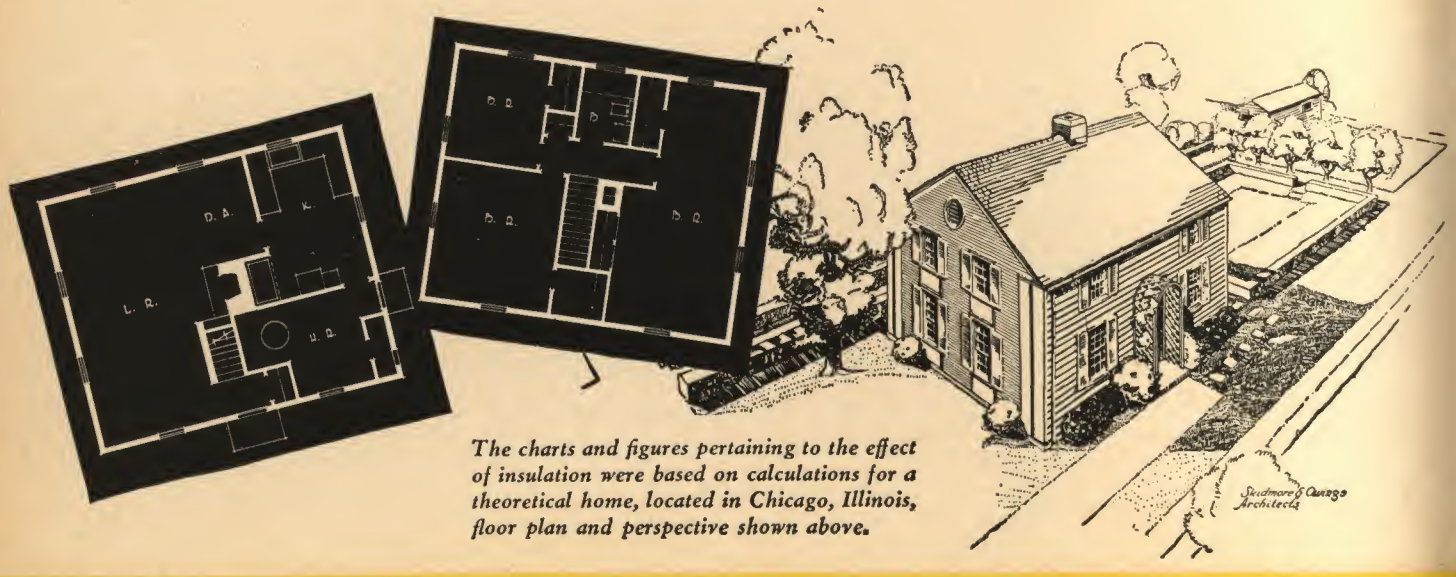
The chart on page 7 shows the effect of insulation on the home pictured below.

Note (under the heading "Maximum Hourly Summer Heat Gain") that if such a house were uninsulated, some 36,345* British Thermal Units of heat would seep in every hour. This means that every 60 minutes enough heat to boil some 20 gallons of water would pass through the walls and roof.

A Standard thick blanket of Kimsul in the walls and upper ceiling (or roof) would shut out 26.4% of that heat.

In winter the increased comfort from Kimsulating is equally important. Note (in the column headed "Total Annual Heating Load") that Standard thick Kimsul in the walls and ceiling would reduce the heat lost by 25.6%.

* A British Thermal Heat Unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.



The charts and figures pertaining to the effect of insulation were based on calculations for a theoretical home, located in Chicago, Illinois, floor plan and perspective shown above.

The Fuel Saved Soon Pays the Cost of

How much Fuel will KIMSUL SAVE?

As important as comfort is the fuel saved by insulating with Kimsul!

Again the exact answer depends on the size, location and architecture of your home and on the type of heating plant and fuel used. But by referring to the table below, in which are summarized the fuel savings in the typical home, you can approximate the savings Kimsul offers closely enough for practical purposes.

Note that this home, when not insulated, requires some 209,200,000 Thermal Units of heat to keep it warm . . . an amount roughly equivalent to 14 tons of coal.

By completely insulating this home with Standard Kimsul, the heat requirements can be reduced 25.6% to 155,700,000 Thermal Units or to a fraction over 11 tons of coal. And even by insulating only the top ceiling with Standard Kimsul, the heat required can be cut by 10% . . . a saving of about one and one-half tons of coal.

In this case Kimsul would save, every year, from one to three tons of coal. If more costly fuel were used, the saving of that amount of heat would be even more important.

Saves on the Cost of the Heating Plant also

And this is only one of the savings good insulation makes possible. Insulation not only reduces the amount of fuel needed to keep a home comfortable, but actually makes it possible to keep a home warm with a smaller, less expensive heating plant.

According to Professor Larson (Head of the Mechanical Engineering Department of the University of Wisconsin) who used his own home as an example:

> $51 spent to insulate the top ceiling with ½-inch of good insulation would effect a $53 savings in the initial cost of the heating plant. And $142 spent to insulate both walls and ceiling would have saved $192 in the cost of the heating equipment.

With these facts in mind, you can see that insulating with Kimsul is one building item which should never be regarded as an expense, but rather as an investment whose entire cost is often paid back in immediate savings on the size of the heating plant and is then paid back, over and over again, by yearly savings on fuel.

HEATING LOAD AND SAVINGS

"Complete" Insulation (Walls and Top Ceiling or Roof)

	No Kimsul	Commercial Kimsul	Standard Kimsul	Double Thick Kimsul
Annual Load*	209,200	169,100	155,700	140,200
Annual Saving*		40,100	53,500	69,000
%Saving		19.2%	25.6%	33.0%
Top Ceiling or Roof Insulation Only				
Annual Load*	209,200	194,200	188,200	182,200
Annual Saving*		15,000	21,000	27,000
%Saving		7.2%	10.0%	12.9%

*Expressed in Thousands of B.T.U.

SUMMER HEAT GAIN AND SAVINGS

"Complete" Insulation (Walls and Top Ceiling or Roof)

	No Kimsul	Commercial Kimsul	Standard Kimsul	Double Thick Kimsul
Hourly Gain#	36,345	28,835	26,732	24,298
Hourly Saving#		7,510	9,613	12,047
%Saving		20.7%	26.4%	33.2%
Top Ceiling or Roof Insulation Only				
Hourly Gain#	36,345	31,550	30,340	28,889
Hourly Saving#		4,795	6,005	7,456
%Saving		13.2%	16.5%	20.5%

#Expressed in B.T.U.

How much, and what thickness of Kimsul do you need?

In the average uninsulated home the heat wasted through walls and ceilings is divided about 60% through the walls and about 40% through the upper ceiling or roof. The diagram below shows how much of this heat can be saved with different thicknesses of Kimsul.

Note that even Commercial thickness stops a lot of heat from escaping . . . the percentage increasing as a greater thickness of insulation is used. However, experience shows that a Standard Kimsul blanket generally provides the greatest comfort and fuel saving at the least cost, thus giving the best return on the insulation investment.

Obviously, if you live in a region subject to severe winters . . . or fuel is high in price . . . it is an advantage, both from the standpoint of economy and comfort, to use a greater thickness. And in this fact lies one of Kimsul's outstanding advantages.

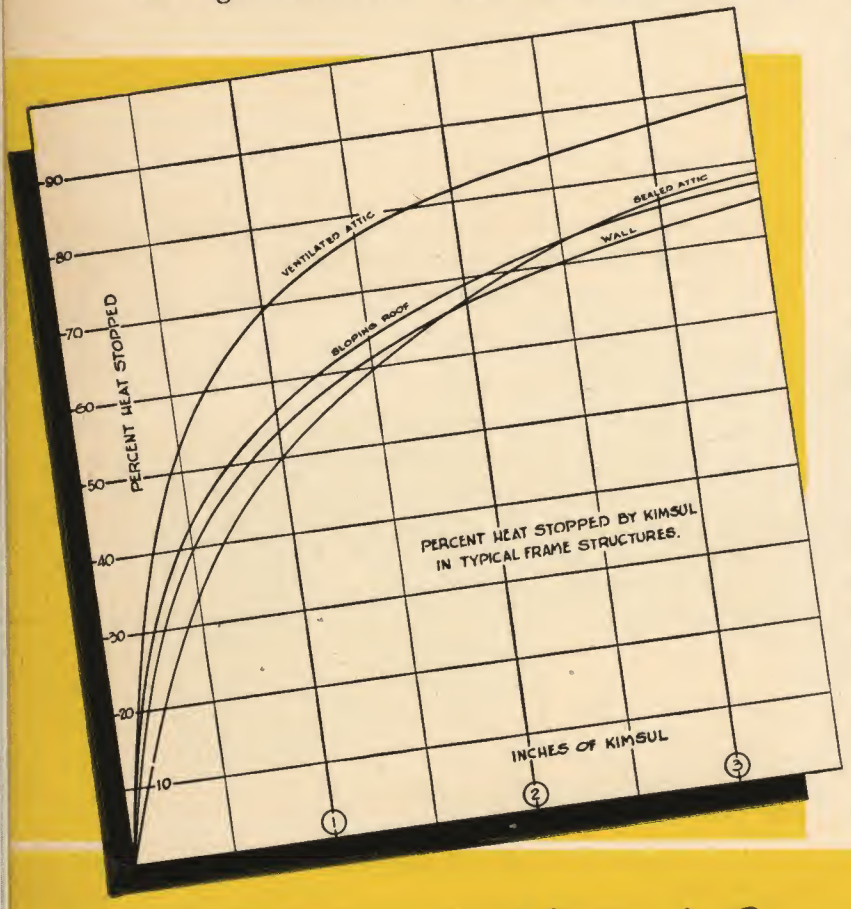


1. *A Standard blanket of KIMSUL, insulating a sloping roof stops approximately 58.6% of the heat that would otherwise be lost through it.*

2. *A Standard blanket of KIMSUL, insulating the top ceiling below a ventilated attic (an attic with windows or louver openings) saves about 70% of the heat that otherwise escapes through it.*

3. *Standard KIMSUL in the side and end walls will save about 54% of the heat that would otherwise escape through them.*

4. *Complete insulation of walls and roof with Standard KIMSUL will save up to 57% of the heat that would otherwise escape through them.*



For once you determine, with the help of your contractor or architect, the thickness of insulation which is best for your home, you can get that thickness in Kimsul.

Partial Insulation is Good—Complete Insulation is Better

While the question of the proper thickness of insulation depends on climate, and the cost of fuel, there is no question about the *extra value in completely insulating a home.* The time to insulate is when you are building. Once your walls have been finished, it is not only costly but sometimes impossible to get complete insulation which will be permanently satisfactory.

Of course, if your home is already built, you can save up to 70% of that 40% of the heat which is now escaping through your roof by insulating your top ceiling, with Kimsul. But remember, 60% of the total heat lost in an uninsulated home escapes through the side walls. So you can't reap the greatest advantage in Kimsulating unless *both* walls and roof or upper ceiling are protected.

The best part of it is that when you use Kimsul you can afford to do a complete job. As the typical examples of cost on the next page show, Kimsul is so economical that it is wasteful to skimp on your insulating job.

How much does it Cost to INSULATE WITH KIMSUL?

Actually the correct answer to that question might well be "Nothing"! And the same would apply to any other good insulation.

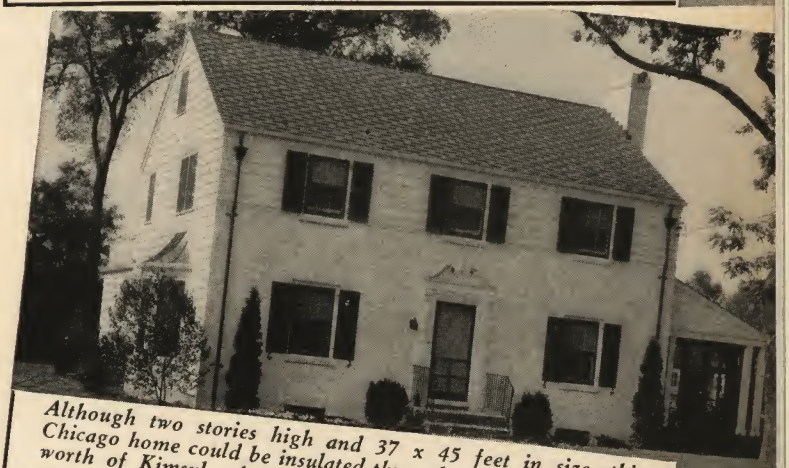
Good insulation, properly installed, will generally pay for itself in a few years through the fuel it saves. And in many new homes the initial cost is saved *immediately* because of the smaller and lower priced heating plant required.

However, the less insulation costs initially, the greater the return on the insulation investment. A few typical homes are shown which indicate the economy of Kimsul. In all likelihood, one of them corresponds closely enough to the home you are planning, to give you a fairly good idea of what it will cost you to Kimsulate. Or, your architect or builder can quickly figure it for you.

A glance at the next two pages, which show how quickly and easily Kimsul can be installed, will demonstrate some of the many reasons why Kimsulating is so inexpensive.



About $91. worth of Kimsul will insulate the walls and roof of this six room Minneapolis house and make possible savings up to 37.9% in the annual fuel bill.



Although two stories high and 37 x 45 feet in size, this Chicago home could be insulated throughout with only $135. worth of Kimsul. An investment which could be expected to reduce fuel bills by about 45%.

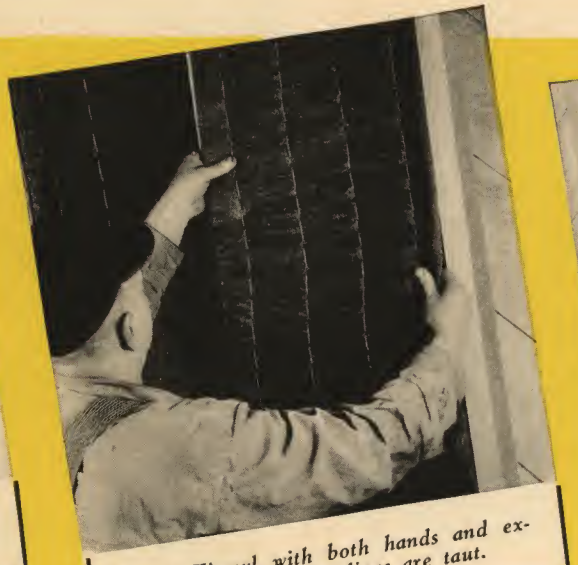


This six room Albany house could be Kimsulated throughout with about $115. worth of Kimsul with a fuel saving up to 35%.

Here's How KIMSUL Reduces Installation Costs



Nail on at top with a short piece of lath and two nails.



Grasp Kimsul with both hands and expand until stitch lines are taut.



Attach to floor plate with lath and nails and cut off.

Usually one man can do the job . . . easily and quickly. No special tools or experience are required. And Kimsul is so light, flexible and clean, that men enjoy working with it.

Goes up in a "Jiffy"

Using the shipping carton as a dispensing container, the end of a Kimsul blanket is first expanded for about 6 inches and fastened to the under side of top plate between studs with a piece of lath and a couple of nails. Then the blanket is grasped with both hands and expanded some 5½ times its compressed length.

The Presstitching is then taut and supports the blanket in place. Finally Kimsul is attached to the upper side of the floor or bottom plate and cut off with a hatchet, knife or scissors. That's all there is to it.

It's There to Stay!

Installed this way you'll never need to think about the permanence of your Kimsul installation. It resists fire and moisture and, most important perhaps to you, it stays where it belongs.

For Kimsul with its many individual plies, creped to give a multitude of air spaces, and strongly stitched together, does not overstretch, sag or settle.

Sloping Roofs and Floors Are Easy Too

The Kimsul blanket should first be expanded the needed length and cut off. Then, starting from the bottom, it is fastened to the rafter plate, then to the ridge board with lath and nails. Laths tacked across framing members (see photo) provide temporary support for blanket until ends are fastened in place.

The Fuel Saved Soon Pays the Cost of

Then to make a snug, tight fitting job, lengths of lath are nailed along the edges of the Kimsul blanket, into the rafters . . . or by using a blanket slightly wider than the rafter spacing, Kimsul can be made to provide its own rafter tacking strip. These methods, by providing air space between the Kimsul blanket and the roof, considerably increase the heat stopping power of the roof as a whole.

Exposed attic floors are easiest of all to Kimsulate. A single length of blanket expanded until stitch lines are taut, and fastened at plates, will completely cover entire areas between joists.

No Waste

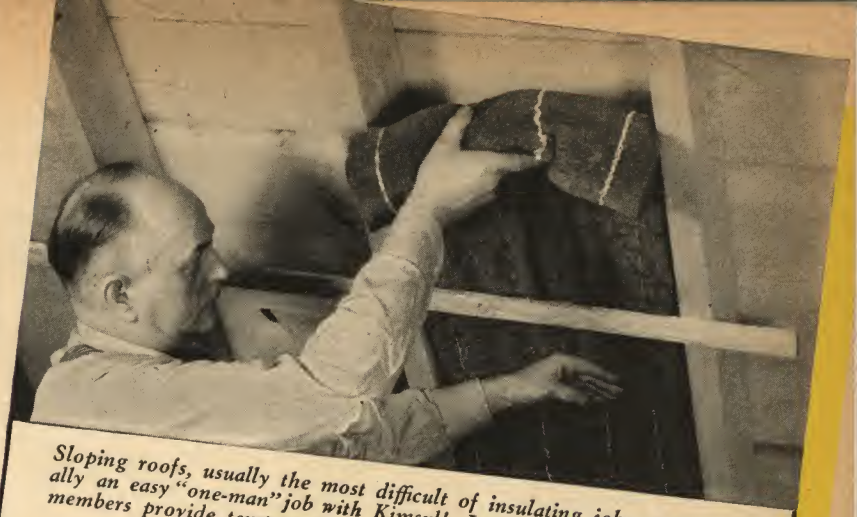
Pieces left over from insulating other spaces, crammed into small spaces around doors and windows (see photo) effectually insulate such areas against infiltration losses.

Vapor Sealing

Wherever the difference between outdoor and inside temperatures is great enough to cause condensation, the final step in insulating . . . regardless of the insulation used . . . should be the installation of a Vapor Seal.

It is recommended that this Vapor Seal be separate from the insulation itself. Otherwise its effectiveness will be nullified by joints and cracks through which moisture can seep into the framework of the building, causing damage to the framework, or plaster.

A vapor proof paper is recommended which consists of a continuous asphalt film faced on both sides with Kraft paper. It should be installed on the warm side of wall, floor or ceiling with joints running parallel to and over framing members, with all joints lapped two inches.



Sloping roofs, usually the most difficult of insulating jobs, are generally an easy "one-man" job with Kimsul! Laths nailed across framing members provide temporary support.



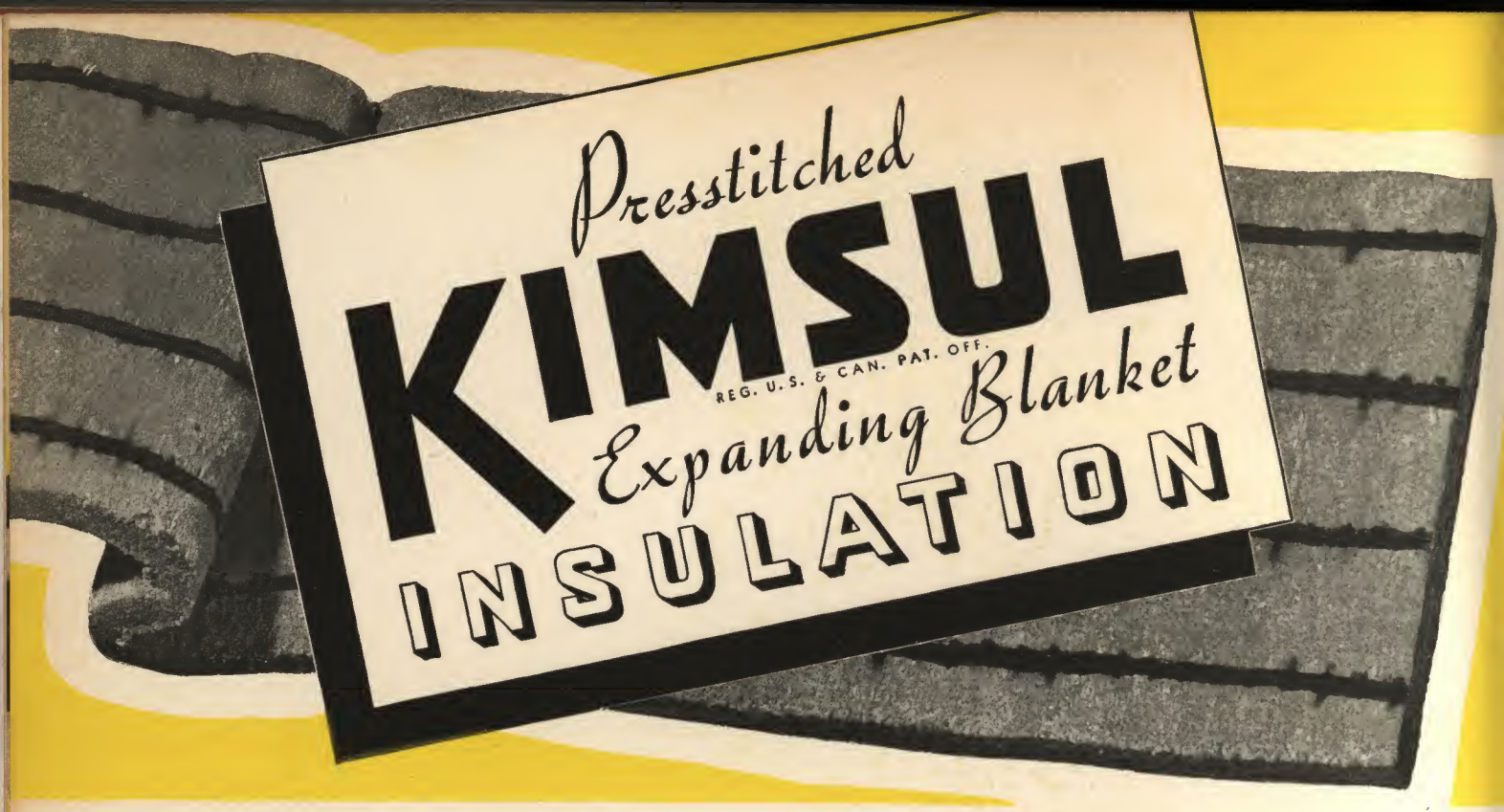
Exposed attic floors are quickly, easily and inexpensively insulated with Kimsul. Yet this simple operation is most effective in increasing comfort and decreasing fuel bills.



Install vapor proof paper to face of framing members on warm side of wall before applying lath and plaster.



Scraps of Kimsul make ideal caulking material for around doors and windows.



Who Makes Kimsul?

Kimsul was developed and is manufactured by the Kimberly-Clark Corporation . . . of international importance for 67 years in the manufacture of wood fibre products. Every stage in its manufacture is under the watchful scrutiny of skilled men of experience. Hence, the Kimsul installed in your home can be expected to be of uniform quality fully up to the rigid manufacturing requirements set by Kimberly-Clark.

Where to Buy Kimsul

Leading Building Material and Lumber Dealers carry Kimsul in stock, or can secure it for you from conveniently located distributors. It is sold only through recognized dealers.

Ask Your Architect or Contractor

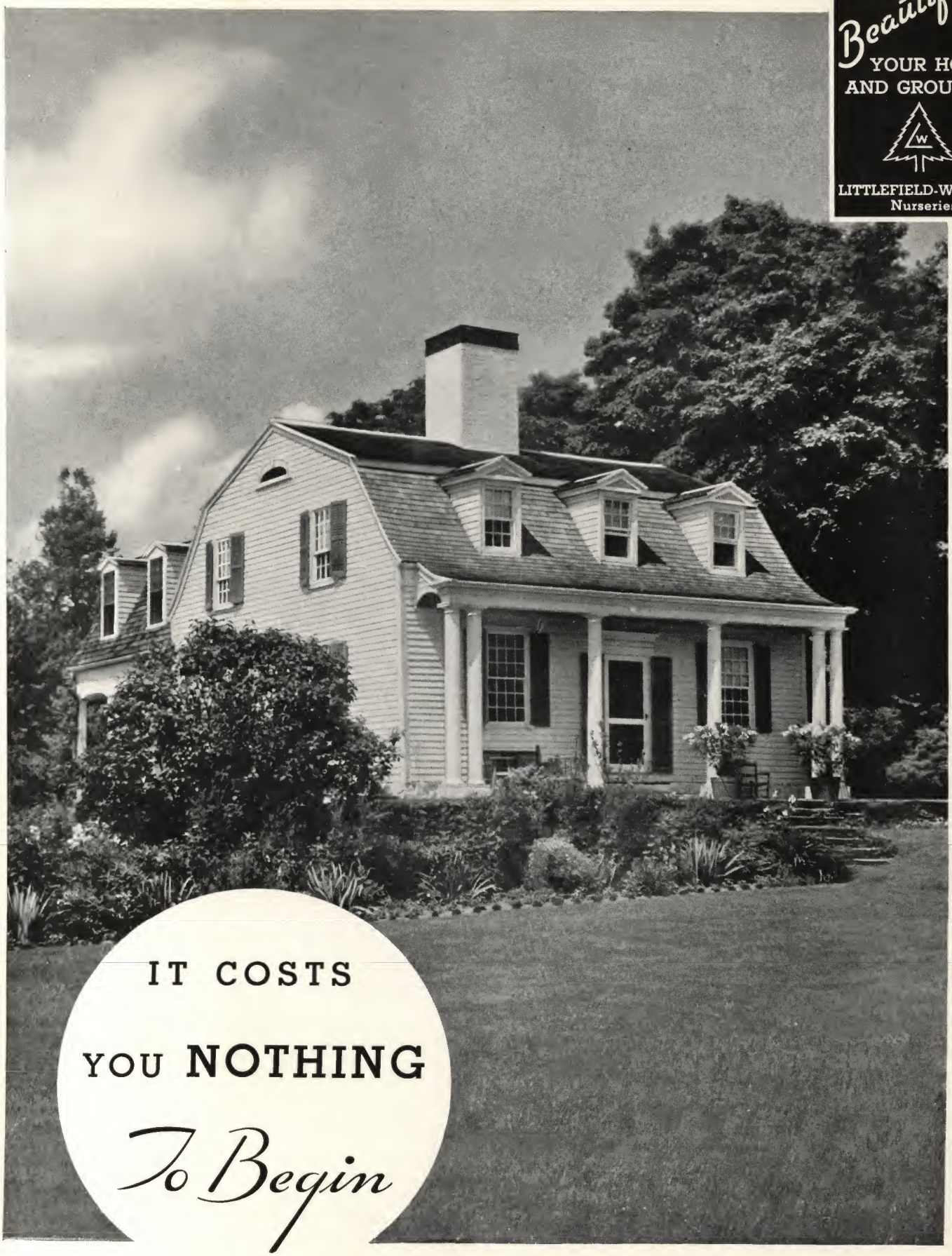
Architects, Contractors and Builders know the value of good insulation . . . what it can add to your comfort, winter and summer . . . and how effectively it can decrease your fuel bills.

We suggest you consult them not only in regard to insulation, but in connection with every investment or improvement you wish to make in a home.

KIMBERLY-CLARK CORPORATION, *Manufacturers*
ESTABLISHED 1872
NEENAH, WISCONSIN
CHICAGO, 8 South Michigan Avenue • NEW YORK, 122 East 42nd Street

. . . for Greater Comfort Winter & Summer

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and approximately 2% OF THE COST OF YOUR HOME to complete a well-planned home planting . . .

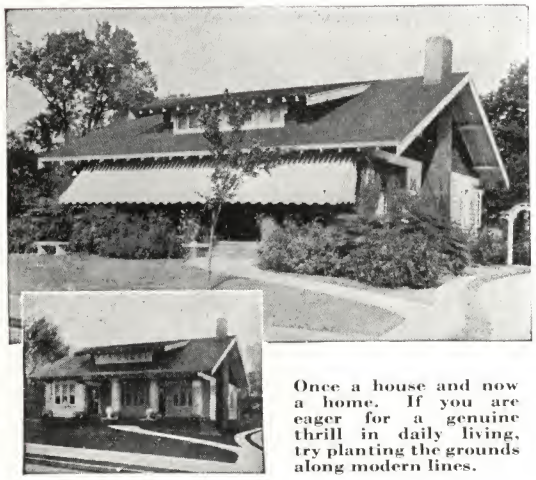
HERE'S WHAT A WELL-PLANNED PLANTING

Better appearance, of course!

It might surprise you to know how many of your neighbors and fellow townsmen have imagined what the inside of your home looks like, judging it solely on the outside appearance. Perhaps you built it recently—and when you got through paying bills, discovered you didn't have left an amount of money which you thought sufficient to plant your grounds attractively. Or, perchance your home is one of those where trees and shrubs and flowers are more or less taken for granted. You have them, certainly—you've always realized they added something to your place, perhaps without realizing how much more a *well planned* planting might add in beauty and new enjoyment of your home and grounds.

Consider your entrance doorway, for example! The beauty of its simple invitation enhanced by an appropriate planting of shrubs or evergreens says "Welcome" to your friends long before your appearance at the door. Or think of that one unsightly view you get from a certain angle of your property—nearly every home has one—have you ever realized how that view might be hidden or beautified by a natural screen or frame-work of trees and shrubs and, perhaps, flowers?

You should consider, too, the change you can make in the appearance of the house itself with the proper planting. A house that seems too high—too square and box-like, or too low and rambling, can have its faults easily and inexpensively corrected by proper planting.



Once a house and now a home. If you are eager for a genuine thrill in daily living, try planting the grounds along modern lines.



Before and After Planting
From desolation, this little house was transformed to a home within a fairy garden by means of plants and flowers.

Increasing your property value

No matter how well content you are with your present home, you should be interested in its selling value; not because you are planning to move, but because it better justifies the constant expenditures you are called upon to make for it. Your home should gain in value with every improvement you make.

Correctly planned planting of your grounds is one of the surest investments of this type that you can make. Facts prove that one of the strongest appeals to prospective home owners is the homelike appearance that a house may possess. Many times, house hunters are influenced in their decision to buy fully as much by homelike appearance as by the latest modern improvements the building itself may contain. One of the surest ways to make a house into a home is to plant the grounds in a way that achieves beauty combined with simplicity. You will find that the increased selling value of your home will be out of all proportion to the small amount you need spend for a planting that will achieve this simplicity and beauty.

REMEMBER—EVERY LITTLEFIELD-WYMAN PLANTING IS

CAN MEAN TO YOU AND YOUR HOME

Greater Enjoyment From Your Home and Grounds

Not only better appearance—not only increased property value—but the equally important advantage of greater enjoyment, comes with correct home planting. Fully as important as the arrangement of furniture within your house is the planting of the trees, shrubs and flowers that make your grounds useful as well as beautiful. It is amazing how many people think of their yard solely as a means of separating their house from their neighbor's, little realizing how many "rooms" they can add to their house through careful consideration of their yard's possibilities. Why not an outdoor living room? Why not a sunny, healthful playroom for the children, where green grass carpets the floor and living walls assure their privacy and safety? Why not a woodsy nook where warm-weather meals can be enjoyed, with sun and air to sharpen the appetite? These extra rooms are within easy reach of everyone who has a home.

You will find new rest and relaxation comes with an hour spent in your outdoor living room. Entertainment of your friends there will be charmingly informal. Or you might gain many hours of enjoyment from a croquet court —all of them in the perfect privacy of a living room that is outdoors.



Children love flowers. Their inborn appreciation of the beauties of nature will respond quickly to these additions to the home grounds.

If you need a Hobby

The joy of a hobby that brings lasting beauty with it, and at the same time is good for you, comes with working with plants and flowers. Once begun according to a correctly designed plan, you will find it easy to carry on the project yourself. You will be surprised how much you'll enjoy it and how easy it is to have your own rose garden, perennial border, bird sanctuary or rock garden.



The "Outdoor Living Room" — a cool, secluded spot, comfortable and inviting to every member of the family and their guests.

THE FOLLOWING PAGES WILL SERVE TO SHOW YOU HOW LITTLEFIELD-WYMAN CAN HELP TO BRING YOU NEW ENJOYMENT FROM A WELL-PLANNED HOME PLANTING

WHY IT COSTS LESS IN THE LONG RUN

Perhaps you are one of those small-home owners who feel that landscaping is for the owner of large estates. Perhaps you feel that a large planting organization like Littlefield-Wyman Nurseries is not interested in beautifying your small grounds.

Hundreds of small-home owners have learned to their great satisfaction that this large organization is fully as interested in their problems as in those of the owner of a magnificent estate. And every Littlefield-Wyman facility is planned as much for the owner of a small home as for any user of landscaping service.

May we, for a moment, assume that you have asked Littlefield-Wyman Nurseries to plan a planting for your grounds? Let us see how your interest would be protected by this organization.

Our Free Design Serves as a Guide

If you were to visit us at North Abington, no doubt you would meet an important member of our organization. He is the planting designer, who spends all of his time creating plans for home owners who are interested in beautifying their grounds. He knows the answers to countless questions—where various types of shrubs and flowers should be used and in what proportions they should be planted. In his mind are many fundamentals governing correct planting, from the standpoint of beauty, arrangement and usefulness.

He is important to you because he makes the first necessary step in the beautifying, that of conceiving the plan by which the planting will be done. We say his work is important because only with the proper plan can you hope to reap the full benefits of your home planting. It is perfectly possible to place shrubs in gardens here and there and add to the beauty of your grounds, but without a plan your planting will eventually suffer in appearance and usefulness. Littlefield-Wyman Nurseries will create a plan specifically designed for your grounds, without obligation. This plan will serve as an authoritative guide to all of the planting you do.

Your First Small Investment Gives You a Real Start

Don't think for a minute that planting must all be done at once. Quite the contrary—you will find that if you beautify your grounds according to a carefully prepared plan, you may have the work done step by step. Your first small expenditure for trees or shrubs or flowers will make a vast difference in the appearance of your home, taking you on your first step toward the beauty that will eventually be yours.

You Can Take Your Planting and Spending Slowly

If you follow a Littlefield-Wyman plan, each step you take in planting your grounds will be complete within itself. Spending as little as $25 to $50 per year, you can carry out your plan, beautifying a different side of your house, or a different section of your yard, until the entire planting is completed. For example, you might begin with your front lawn. Next will come your entrance door and the planting that beautifies the front of your house. After that, the side areas may be planted, and you may work gradually back to the gardens, play-yard and outdoor living room that your grounds will eventually contain.

Every Dollar You Invest is Protected By Our Guarantee

Every Littlefield-Wyman planting is unconditionally guaranteed for one year. This means that perennial flowers planted in the Fall are guaranteed to come up and bloom the next year, or they are replaced without charge. It means that trees and shrubs transplanted from our acreage must take hold and grow on your grounds. Littlefield-Wyman Nurseries watch over their plantings to be sure these things take place. Thus, from the smallest flower to the largest tree, the gamble is entirely removed from your home planting, if you use the services of Littlefield-Wyman Nurseries.

Each Step Takes You Nearer Completion of Your Plan

You will find new joy in watching your Littlefield-Wyman plan come to life! You'll be amazed how easily a few dollars can be transformed into beauty for your grounds, each expenditure bringing with it some new enjoyment, some greater addition. If you are doing your planting on a budget, you will find it hard to wait for the additional steps that go to make your plan complete!

REMEMBER—EVERY LITTLEFIELD-WYMAN PLANTING IS

TO USE Littlefield-Wyman SERVICE

Over Forty Years' Experience Assures Your Satisfaction

Since Littlefield-Wyman Nurseries were established in 1895, we have made over five thousand plantings. These have included many costing no more than twenty-five dollars, as well as many whose cost ran well into the thousands. Colleges, hospitals, and countless other public institutions have turned to Littlefield-Wyman Nurseries for attractive landscaping of their grounds.

This broad experience enables Littlefield-Wyman to perform an unusual service. Recommending correct locations for driveways, walks and walls; designing a complete plan showing the proper locations of the planting material in relation to buildings; these are parts of Littlefield-Wyman service. This wide and varied experience has also enabled us to plan with unusual results the building of pools, rock gardens or rockeries, sunken gardens, and outdoor "rooms," such as the living rooms and play-rooms before discussed. It is this experience, too, which gives us proved ability to screen out undesirable or objectionable views or, with a frame of trees and shrubbery, to make more attractive those which it is desired to keep.

Many questions that arise in the correct planting of trees, flowers and shrubs can be answered best by the trial and error method. Thus it can be seen that this forty years of experience places at our fingertips the answers to countless questions which might prove most difficult of solution to individuals or firms whose experience had been more limited.

Fifty Acres of Fine Stock Offers You Wide, Sure Choice

Throughout this part of the country, landscape architects and gardeners look upon the Littlefield-Wyman catalog as a source of fine material for their work. Our fifty acres of stock at North Abington contain literally a million plants, varying in size from tiny seedlings to thirty-foot trees. When you use the services of Littlefield-Wyman Nurseries, this entire fifty acres of stock is available to you. Like artists working with limitless colors, the Littlefield-Wyman organization can choose almost anything required from the many colored perennials, gorgeous flowering shrubs, stately evergreens in their various shades, and spreading shade trees, that are included in our fifty-acre nursery. Small, round evergreen trees and massive columnar varieties allow us to achieve effects of proportion. Flowering magnolia trees, or hybrid clematis with flowers two inches across may be used to bring a new beauty to your home and grounds. At our three hundred foot greenhouses, we are constantly testing new varieties discovered by the Government Plant Explorers and propagating those new plants which prove to be hardy and worthwhile. A brief trip through our Propagating Department is an education in plant life.

ON THE NEXT PAGE WE SHOW YOU SOME OF THE FACILITIES THAT 40 YEARS HAVE BUILT UP TO SERVE YOU BETTER

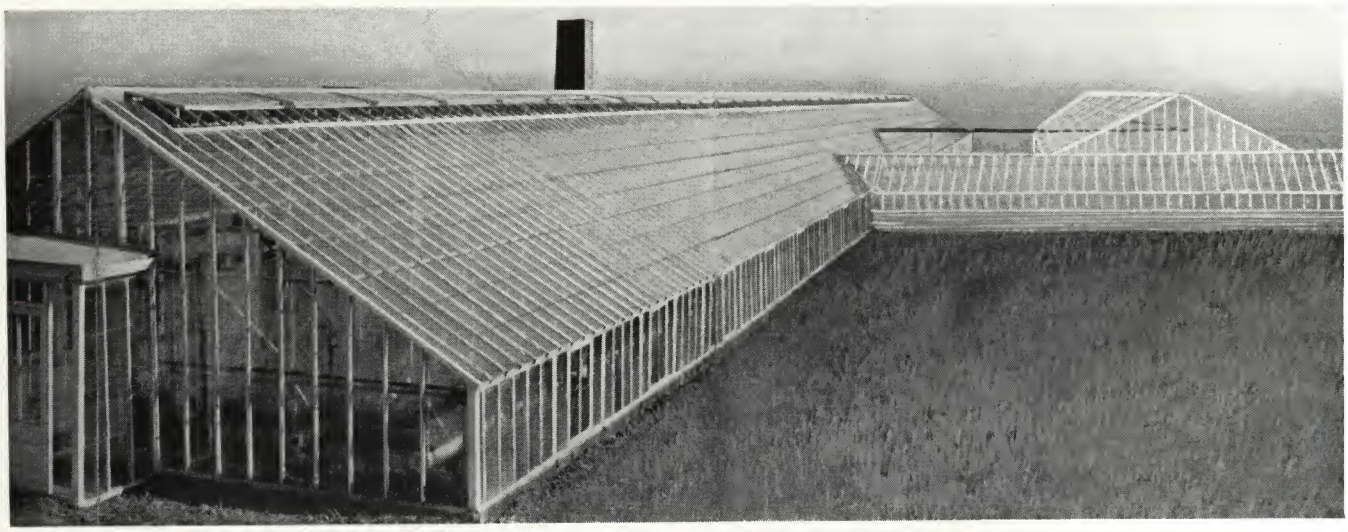


UNCONDITIONALLY GUARANTEED FOR ONE YEAR . . .

HERE ARE SOME OF OUR FACILITIES



Part of one of the extensive fields of evergreen trees which, with their many shades of green and in their many proportions, play an important part in the planting of the grounds of many homes and institutions.



Under 20,000 square feet of glass, rare flowers are propagated and tiny seedlings are nursed into life in this great greenhouse, a part of Littlefield-Wyman Nurseries.



(Left)
The planting designer who, over his drawing board, develops plans that bring new beauty to many homes, parks and public Institutions.

(Right)
Part of the Littlefield-Wyman organization. These workers, experienced in the handling of plants of all kinds, assure you the best of service on your planting job and maximum results from the trees, flowers and shrubs which they put in.



Littlefield-Wyman *Nurseries*

NORTH ABINGTON, MASS.

Can You Answer These Questions?

THEY ARE OF VITAL IMPORTANCE IN YOUR HOME PLANTING INVESTMENT

1. Should broad-leaved evergreens be planted singly or in groups for the best effect?
2. In laying out a flowering shrub border, should shrubs of one variety be planted in groups or spotted singly throughout the planting?
3. What type of planting is it desirable to use around the foundation of a low, rambling type of house?
4. Do Roses thrive better in shade, partial shade, or in full sunlight?
5. Do Rhododendrons and Azaleas require acid or alkaline soil?
6. What plant material is suitable for covering and binding a steep bank?
7. What shrubs retain their berries longest in the fall?
8. What dwarf evergreens will stay green winter as well as summer?
9. What plants are suitable for a dry, sunny exposure?
10. How should the accent trees be planted in relation to the house and yard?

THESE QUESTIONS AND MANY OTHERS WILL BE ANSWERED FOR YOU WITHOUT OBLIGATION IF YOU ASK THE HELP OF THE LITTLEFIELD-WYMAN NURSERIES.

ACT NOW!

This card requires no postage.

Fill in and mail it now for prompt attention to your Home Planting Problems

Littlefield-Wyman Nurseries
North Abington, Mass.

I am interested in beautifying my home grounds with proper planting. I understand that I may ask your help without obligating myself in any way.

☐ Please send further information on home planting.

☐ Please have your representative get in touch with me in regard to furnishing a free design for proper planting of my grounds.

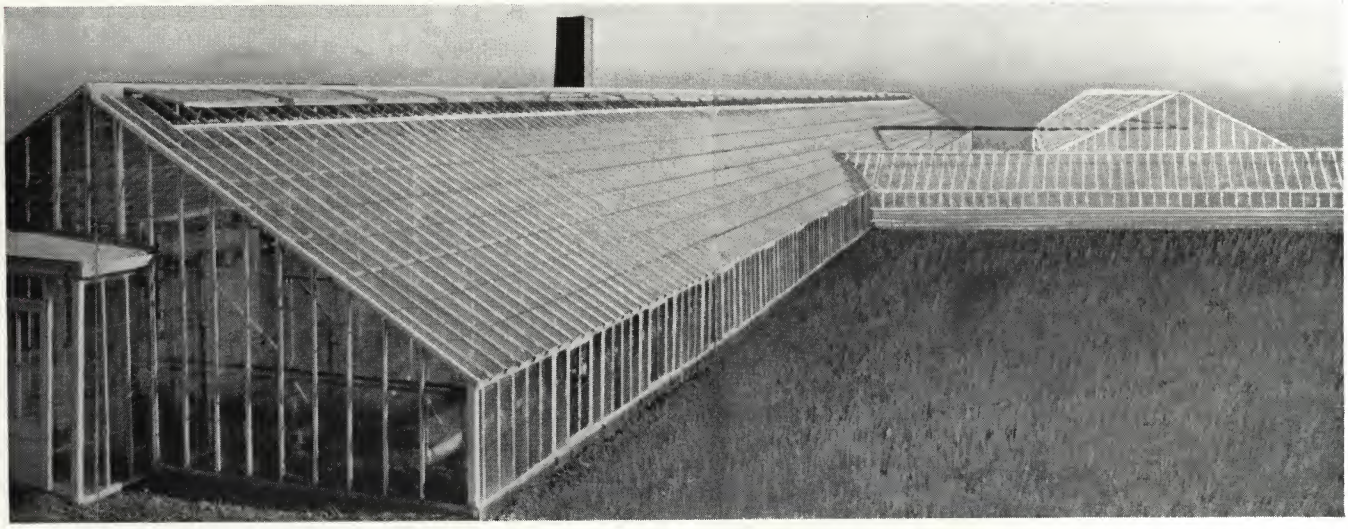
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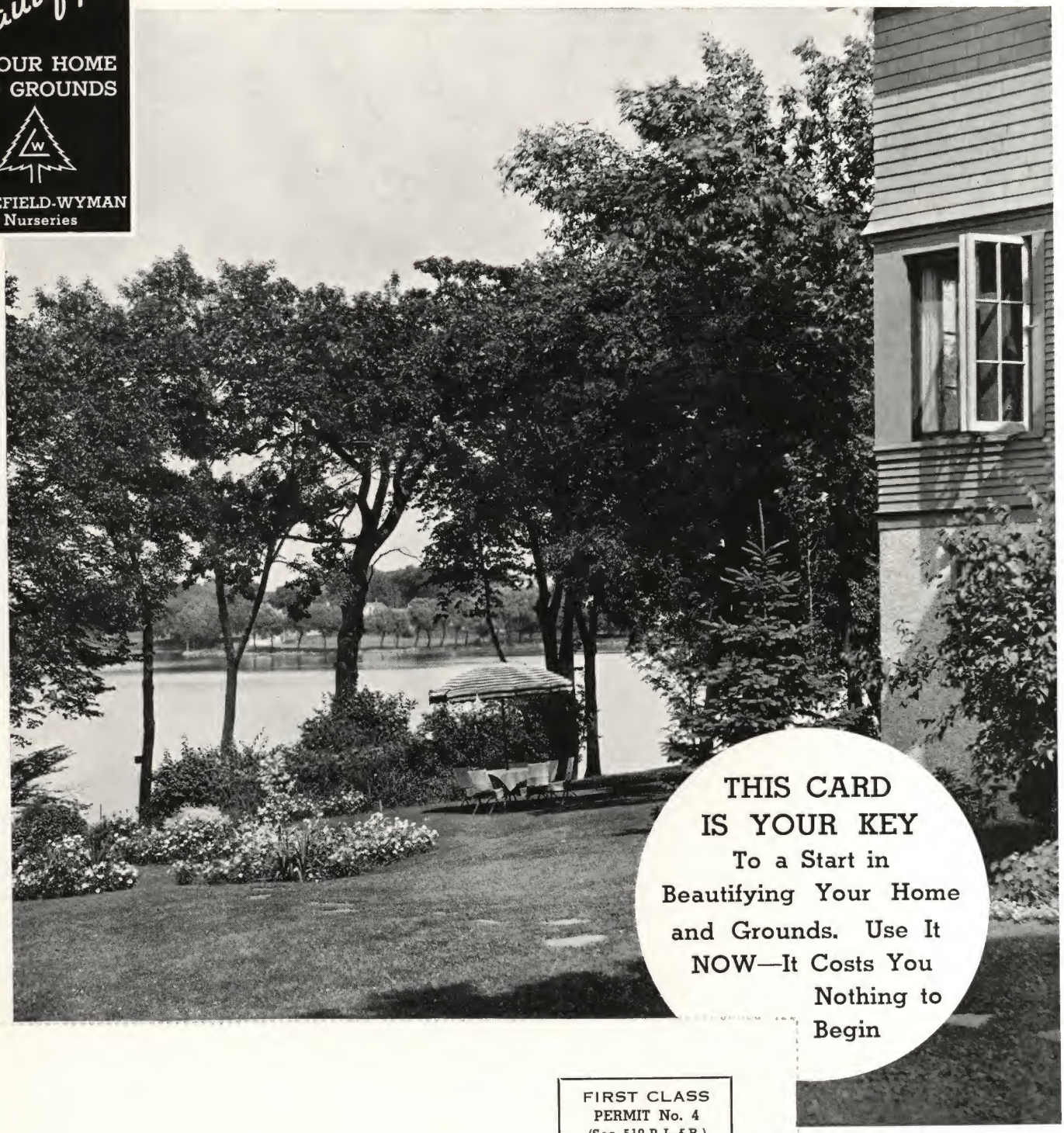
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Name_____

Address_____

Beautify
YOUR HOME
AND GROUNDS

LITTLEFIELD-WYMAN
Nurseries



THIS CARD
IS YOUR KEY
To a Start in
Beautifying Your Home
and Grounds. Use It
NOW—It Costs You
Nothing to
Begin

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No. Abington, Mass.

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MINNEAPOLIS-HONEYWELL

AUTOMATIC ★ ★ ★ ★ ★ ★ ★ ★ ★ CONTROLS

For Heating, Ventilating and Air Conditioning

Install Automatic Heating



and Air Conditioning

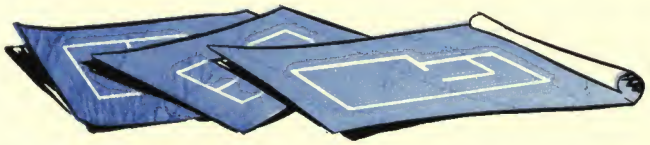


BUT

don't overlook the controls that make it automatic

MINNEAPOLIS

SO YOU'RE GOING TO BUILD A HOUSE



Of course **you are planning to install Automatic Heating and Air Conditioning in some form or other in your new home, but have you given Automatic Controls the consideration they deserve? Automatic Control makes Automatic Heating and Air Conditioning possible. Without Automatic Control neither could exist.**

● **On the following pages are described the functions of Automatic Controls as applied to various types of Automatic Heating and Air Conditioning equipment. This will enable you to determine the kind of control equipment necessary to accomplish the results desired.**

● **Minneapolis-Honeywell has nothing to sell directly to you, although it is the oldest and largest manufacturer of control equipment in the world. Minneapolis-Honeywell controls are sold to manufacturers and dealers, and are installed with your Automatic Heating and Air Conditioning equipment. Their importance cannot be too strongly stressed because Automatic Controls are responsible for the successful operation of the equipment you buy.**

H O N E Y W E L L



M-H BASIC CONTROLS

BASIC AUTOMATIC HEATING CONTROLS

● Automatic heating can be accomplished only if the burner, regardless of the type of fuel used, is equipped with automatic controls. These controls should consist of a thermostat to stabilize room temperature, a limit control to restrict the temperature of the furnace or boiler at a given point, a primary control to operate the burner in the case of oil or coal firing, and a valve in the case of gas heating. Such controls, of course, are necessary for the operation of your burner and are required by most local ordinances. They represent the minimum equipment with which Automatic Heating can be properly installed.

Even if this minimum equipment is all that you require, insist upon Minneapolis-Honeywell Controls, for they insure the best performance from your system and make sure that proper controls will be available for future equipment if you make additions or changes later. Minneapolis-Honeywell Automatic Controls are accepted as standard by the majority of manufacturers, and are available for all types of oil, gas, or coal burners, as well as kindred equipment. The Minneapolis-Honeywell line is complete in itself.

In order to make list prices of Automatic Heating units attractive, most dealers supply only standard equipment, which includes a plain type thermostat such as the Acratherm. There are, however, several additional or optional controls you should know about. You probably will want more than the very minimum of controls, especially in view of the fact that complete automatic control will give much more comfort, convenience and economy, and will actually cost but little more.



THE ACRATHERM

MINNEAPOLIS-HONEYWELL

THE ACRATHERM • A REVOLUTIONARY ROOM TEMPERATURE CONTROL EMPLOYING THE APPROVED PRINCIPLE OF "HEAT ACCELERATION"

● Every automatic heating plant must have a thermostat, but only the M-H Acratherm will give you the perfection of temperature control you should have. It will probably cost you little, if any, more than a conventional type. The Acratherm is a new type of thermostat recently developed by Minneapolis-Honeywell engineers. It is the Minneapolis-Honeywell version of a plain type thermostat, yet has many distinct and revolutionary advantages. Because the greater majority of burners are supplied with M-H Controls, the chances are your dealer will figure the Acratherm in his original price. If some other plain type thermostat is substituted, the following facts will show you why it is wise to insist upon the Acratherm or one of the other Minneapolis-Honeywell Thermostats employing the Acratherm principle.

The Acratherm does what other thermostats strive to do; it provides stabilized heat. By means of its "accelerator", it actually senses temperature changes before they occur and speeds up the heating system to meet them. It literally irons out temperature fluctuations in any modern heating system by automatically adjusting the length and number of burner operations to supply heat in response to the changes in outside weather. Short frequent burner operations in cold weather, and less frequent operations in mild weather, produce stabilized heat. No thermostat without the Acratherm "Accelerator" can do this.

The Acratherm also eliminates the condition known to heating engineers as "Cold 70" which is due to air stratification as a result of intermittent firing. When heat is not supplied constantly enough to cause circulation within the room, there is a tendency for warm air to rise to the ceiling and cold air to settle on the floor, and even though the ordinary room thermostat is satisfied, a chilly feeling prevails. But the Acratherm, because it provides short frequent burner operations, keeps the air within the room circulating and temperatures even at all times.

When you install Automatic Heating insist that it is Acratherm controlled, as the Acratherm is probably Minneapolis-Honeywell's greatest single contribution to the automatic heating industry.



CLOCK CONTROLS

LOWERED NIGHT TEMPERATURE AND FUEL ECONOMY

● It is an established fact that reducing temperature at night and during periods when heat is not needed, can save you from 10 to 30% in fuel costs. To make this lowering of temperature practical, Minneapolis-Honeywell originated and pioneered "Clock Control". It has been proved through exhaustive tests that fuel is saved at the rate of 3.2% per degree of lowered temperature . . . in other words — if your temperature control point is lowered 10° during the night or when temperature at the higher point is not needed, 32% of the fuel normally consumed during those hours will be saved. Lowered night temperature can be automatically accomplished at small cost to you. The M-H Chronotherm or the Da-Nite Acratherm provides "stabilized heat" as does the plain Acratherm, but offers, the additional advantages of lowered night temperature.

THE CHRONOTHERM

● The Minneapolis-Honeywell Chronotherm is the finest thermostat in the Minneapolis-Honeywell line, and is the ace of all thermostats. In addition to providing the same Stabilized Heat as the Acratherm, it is equipped with an accurate and dependable, self-starting, electric clock. It automatically lowers temperature at night and raises the temperature in the morning at any given time before you arise. The Chronotherm is completely automatic. Its added cost is more than compensated for, by the comfort and economy it provides. In fact, you can't afford to be without the Chronotherm in your home.

THE DA-NITE ACRATHERM

● The Da-Nite Acratherm provides the same exclusive control qualities as the plain Acratherm and the Chronotherm, but requires manual attention to provide night temperature shut-down. It is a less expensive way to accomplish lowered night temperature. At night when you retire or at any time when heat is not needed — if you are away for the day — a twist of the fingers reduces the temperature to a fuel saving level for the length of time you designate. When this period has elapsed, the Da-Nite Acratherm automatically restores the comfortable temperature you desire. This means that your home is always comfortable in the morning when you arise, yet you have saved fuel at the rate of 3.2% for every degree you have lowered the temperature at night or during your absence.

MINNEAPOLIS

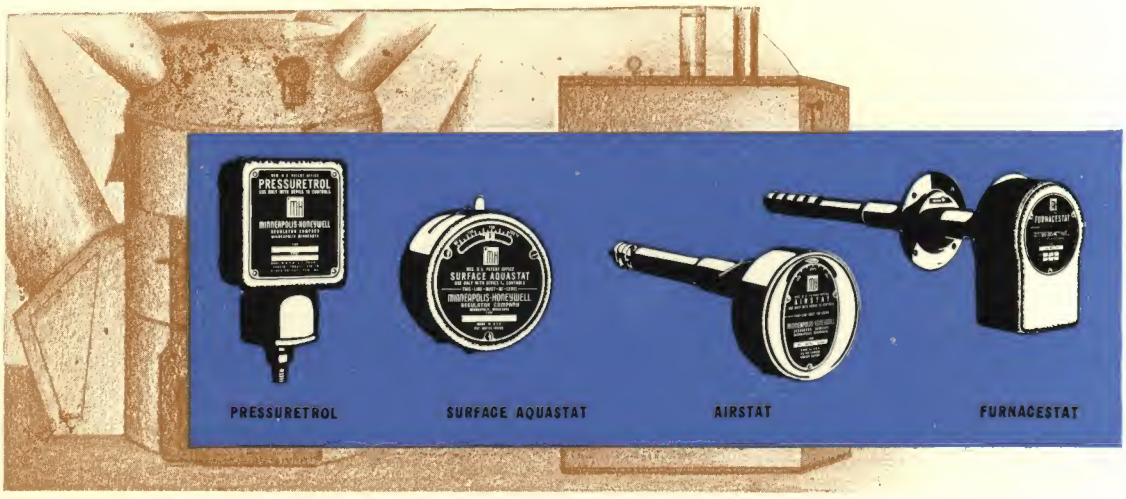
FURNACE AND BOILER LIMIT CONTROLS

● Limit controls safeguard the furnace or boiler against excessive temperatures or pressures. It is not uncommon for doors or windows to be left open, causing the thermostat to continually call for heat with the result that the heating plant itself becomes overheated. Limit controls are required by law in a great many localities and their cost is almost negligible.

The Airstat, for warm air systems, automatically shuts off the burner in the event the temperature of the furnace becomes too high. The Aquastat performs the same function for hot water systems, while the Pressuretrol and Vaporstat provide this protection for vapor and steam systems.

AUTOMATIC BLOWER CONTROL FOR WARM AIR SYSTEMS

● The blower or booster fan increases circulation and also speeds up the delivery of heat in warm air heating plants. Minneapolis-Honeywell Automatic Controls operate the blower or fan in any sequence desired. During summer months the blower can be used to circulate air through the basement, providing a cooling effect. Used at night, the fan or blower empties the house of warm air and draws in cool fresh air from the outside. All of this can be accomplished automatically by the installation of Minneapolis-Honeywell Controls.



DEPENDABLE CONTROLS COST LESS THAN SERVICE

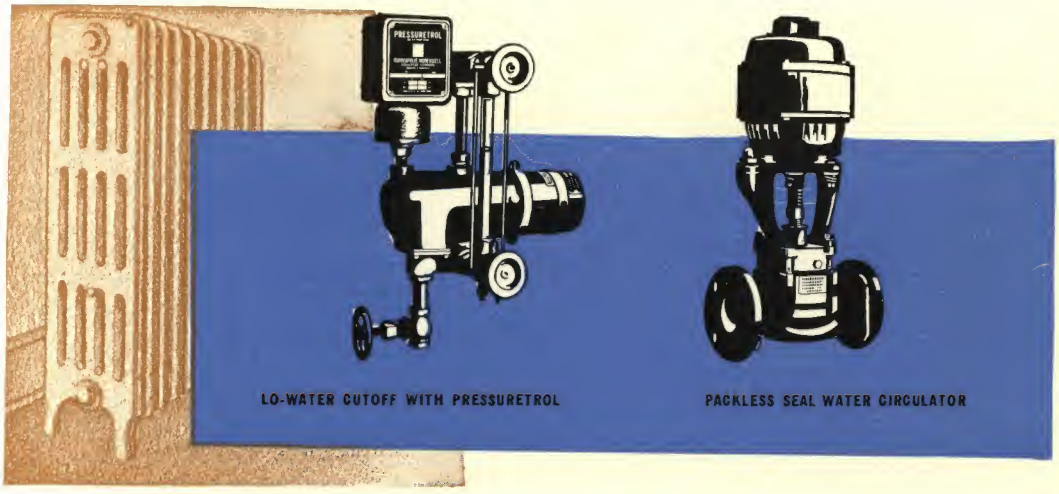
H O N E Y W E L L

THE LO-WATER CUTOFF — FOR STEAM OR VAPOR SYSTEMS

● Considerable damage can result to a steam or vapor system in the event the water level in the boiler becomes too low, either through neglect or because of an unnoticed leak. The M-H Lo-Water Cutoff automatically turns off the burner which remains off until a safe water level in the boiler is restored. No steam or vapor heated home should be without this protection, for lack of it may involve damage to property, or injury to the occupants. An M-H Lo-Water Cutoff can easily be added to any installation at a very nominal cost.

FORCED HOT WATER CIRCULATION

● Forced circulation of hot water in hot water systems is the modern and efficient way to insure quick, even heat. Without proper circulation, remote radiators naturally do not deliver heat as quickly as those nearer the heating system. The Minneapolis-Honeywell electrically operated Water Circulator automatically forces hot water throughout the system providing even distribution of heat to all parts of the home. Because the circulation is much more rapid with the circulator than with natural or gravity circulation, the temperature of the boiler water may be maintained at a lower level. The precision built M-H Packless Seal Circulator is leak-proof and extremely quiet. Its oil reservoir provides scientific lubrication and insures trouble-free operation.



DEPENDABLE CONTROLS COST LESS THAN SERVICE

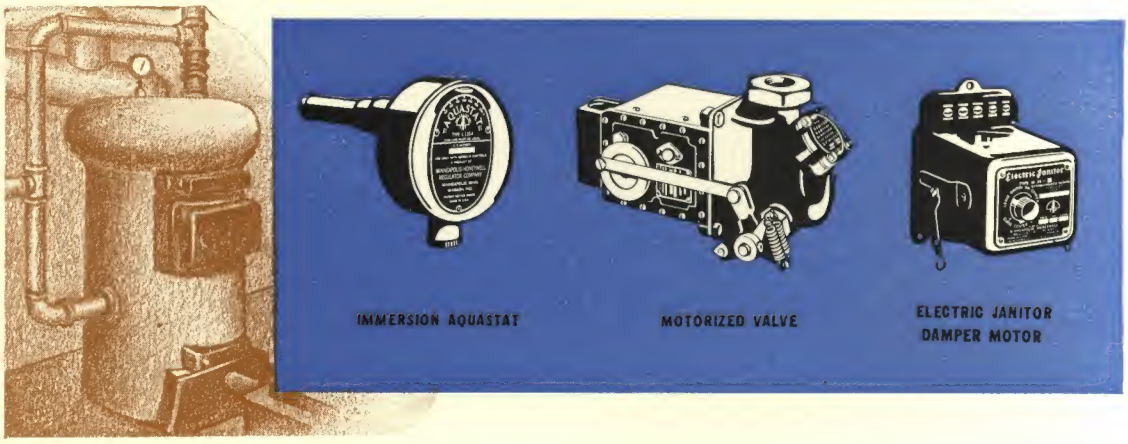
M I N N E A P O L I S

DOMESTIC HOT WATER FROM YOUR AUTOMATIC BURNER

● The Automatic Burner used to heat your home can also furnish a plentiful supply of low cost hot water during the summer as well as winter. When heat is not needed to maintain comfortable temperatures throughout the house, the radiator lines are automatically shut off and heat is transmitted to an indirect water heater. In a steam system, only an indirect water heater and a low limit control (Aquastat) are required. With a hot water heating system, the indirect heater is used, as well as the low limit Aquastat — and in addition a water circulator, discussed on the previous page, and flow valves are used to prevent heat travel to the rooms during the summer.

AUTOMATIC CONTROL OF HAND FIRED HEATING PLANTS

● The simplest form of control is the automatic damper regulator for a manually fired heating plant. The M-H Electric Janitor consists of a room thermostat and an electric motor which opens and closes the furnace or boiler drafts in accordance with the room temperature requirements. A limit control should always be used. This not only provides healthful and comfortable temperatures but eliminates fuel waste due to overheating, which often occurs when the heating plant is manually regulated.

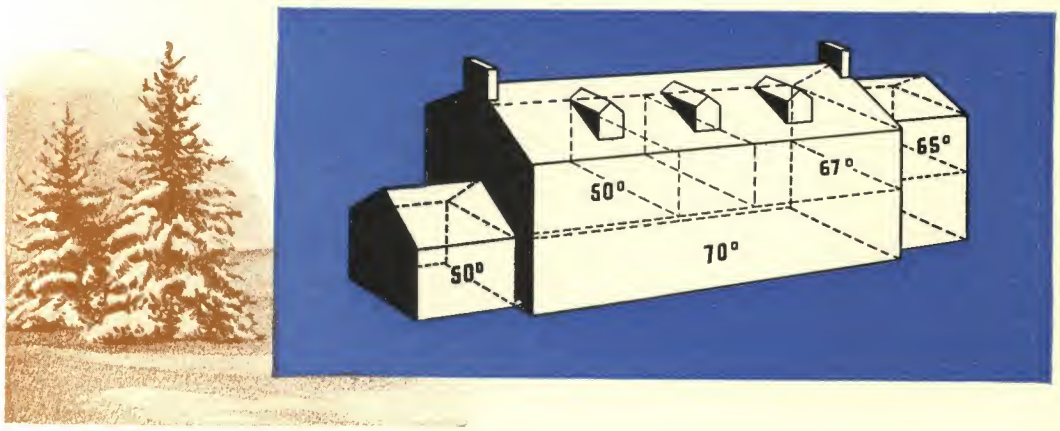


DEPENDABLE CONTROLS COST LESS THAN SERVICE

ZONE CONTROL FOR LARGE HOMES

● If you are building a large home, with servant quarters, guest rooms, garage, and other sections which do not constantly require the same temperature as the living quarters, or a home in which certain sections are differently affected by their exposure to the sun and wind, consideration of automatic control of the individual zones is highly important. The living rooms of your home should be kept at 70 or 72 degrees, while the temperature in the garage need not be more than just above freezing. Servants' quarters and guest rooms should be kept cool during the hours when they are not being used.

The effects of the sun and wind also must be taken into consideration. Rooms most exposed to wind must be supplied with more heat, while rooms which receive the benefit of solar radiation should be given less heat if uniform temperatures are to be maintained. To accomplish such results, the heating system should be divided into sections and controlled under a system known as Zone Control, which takes all heating factors into account and distributes heat accordingly. The economies that are effected will more than pay the cost of a Zone Control System, in a comparatively short time.





AIR CONDITIONING IS NOT NEW

Early device to ventilate a room by a mechanically operated fan . . . Engraving after Boeckler, 1659

AIR CONDITIONING FUNCTIONS

● There are six functioning factors of an Air Conditioning system, namely: Heating, Cooling, Humidifying, Dehumidifying, Circulating and Cleaning.

1. Year 'round functions consist of circulating and cleaning the air.
2. Winter functions include heating and humidifying.
3. Summer functions are cooling and dehumidifying.

AUTOMATIC CONTROL

● Whether you install only Automatic Heating or add to it one or more of the other functions of Air Conditioning, the importance of the Automatic Controls cannot be too strongly emphasized. With adequate Automatic Control, the system, large or small, can be a comfort and joy; without adequate Automatic Control the system will likely be an annoyance and worry.

In general, Automatic Control in an Air Conditioning system does the following:

1 **ELIMINATES HUMAN ERROR:** Automatic Control provides adequate, accurate, and dependable regulation of the several factors and the various mechanical units which produce Air Conditioning. Controls will react to temperature and humidity changes long before the human body is aware of a change.

2 **REDUCES COST OF OPERATION:** When Air Conditioning is Automatically Controlled there is no waste of fuel or power. Overheating in winter and under-cooling in summer are avoided.

3 **PROVIDES SAFETY:** The steam or water pressure in a heating boiler, or the temperature of a warm air furnace must be controlled to safeguard the heating plant. The amount of moisture in the air must be governed to prevent damage. Dependable safeguard can be provided only by automatic safety controls which are a part of every Minneapolis-Honeywell Control System.

There is a Minneapolis-Honeywell Automatic Control for every Air Conditioning function, and for every type of equipment selected. Automatic Control is just as important as the Air Conditioning equipment itself, for without control, a system cannot function as efficiently, as economically, or as conveniently as it should.

MINNEAPOLIS

PLAN AIR CONDITIONING STEP BY STEP

● In all homes there are often several ways of accomplishing the same final results from Air Conditioning. But whether you plan to make the complete installation when you build or to provide Air Conditioning step by step, it is necessary that definite plans be made at the outset. Too much stress therefore cannot be placed on the value of employing a competent Architect or Engineer who can properly plan your entire system. Provision must be made for ducts to circulate conditioned air; the plant itself must be properly located, and many other elements must be taken into consideration that require the services of an Architect or Engineer.

The selection of the proper basic control system is likewise of utmost importance. It is necessary that the control system be such, that whether it is installed at one time, or step by step, it shall be completely coordinated and will function as a unit. Minneapolis-Honeywell is the only manufacturer offering a complete line — the right control for every application. When you start with Minneapolis-Honeywell Controls you have complete assurance that other necessary controls can be added from time to time, so that as you install additional Air Conditioning equipment, the entire control system will work together in perfect harmony.

The construction of your home will play an important part in the operating cost of an Air Conditioning System. Insulation, doors and windows, shades and awnings will make a tremendous difference in the cost of both winter and summer conditioning.

OPTIONAL AIR CONDITIONING EQUIPMENT

● When artificial cooling is not possible or not deemed necessary, considerable benefit can be derived through use of an attic fan. In the evening when outside temperatures fall, the attic fan expels the warm air from the house and fresh, cool air is drawn in through doors or windows left open on the ground floor.

This naturally has a distinct cooling effect, as it not only causes circulation but supplants warm air with the cooler outside air.

Automatic Control can operate an attic fan in several different ways. An M-H Time-O-Stat can automatically start the fan at a given hour and turn it off at any given time, or it can start the fan only when the temperature is above a given point in the home.

H O N E Y W E L L

WHY MINNEAPOLIS-HONEYWELL

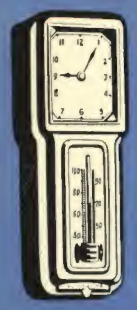
● Minneapolis-Honeywell is the oldest and largest manufacturer of automatic control equipment in the world. It has pioneered and developed every important contribution to this vast industry. Its products are backed by more than fifty years of actual field experience together with constant research and practical laboratory tests. Only Minneapolis-Honeywell can supply a complete Control System to meet every known requirement, be it a small or large home, a simple automatic heating job or a complete year 'round air conditioning installation. Branch offices are maintained in seventy principal cities to assure prompt service at all times. When you install Minneapolis-Honeywell Controls, you have definite assurance that your heating or air conditioning system will function at its best, both as regards performance and economical operation. Your heating or air conditioning Engineer and your Architect will heartily recommend and endorse Minneapolis-Honeywell Controls.



DEPENDABLE CONTROLS COST LESS THAN SERVICE

CONTROL REQUIREMENTS FOR AUTOMATIC BURNERS INCLUDE

ROOM THERMOSTAT



A

CHRONOTHERM—The world's finest thermostat. It is fully automatic, has a self-starting electric Telechron clock movement and offers all the advantages of lowered night temperature without manual attention throughout the entire heating season. Stabilized Heat is assured through the exclusive M-H principle of "Heat Acceleration".



B

DA-NITE ACRATHERM—This thermostat, like the Chronotherm, provides lowered night temperature but requires a manual setback each night before you retire. Day time temperature is then automatically restored at any time you desire. Stabilized Heat is maintained through its "accelerator" . . . an exclusive M-H feature.



C

THE ACRATHERM—This is the M-H plain type thermostat. It has "Heat Acceleration" and will definitely maintain stabilized temperature throughout your home, regardless of outside weather conditions. If you do not decide to have the Chronotherm or the Da-Nite Acratherm, insist upon having the M-H Acratherm.

OPERATING CONTROL



D

PROTECTORELAY—This is the recommended operating control for your automatic oil burner. It is actuated by the M-H room thermostat you select. M-H Protectorelays provide automatic shut down in the event of combustion failure, and provide a means for automatic recycling.



E

GAS VALVE—This is the silent motorized M-H automatic gas valve for your automatic gas burner. Like the Protectorelay for the oil burner, this motorized gas valve takes its control from the M-H "heat accelerated" room thermostat which you specify. Solenoid Gas Valves also available.



F

TIMERELAY—Automatic coal burners are operated by either the M-H Timerelay or Stokerswitch which maintains the fire in mild weather and controls your burner with a maximum of economy. These instruments are controlled by the M-H room thermostat you select.

SAFETY CONTROL



G

AIRSTAT — A safety or limit control which protects your furnace from over-heating, by automatically shutting off your burner before the bonnet or stack temperature in your warm air heating plant becomes excessive, thereby offering complete safety of operation.



H

AQUASTAT — Should a window or door be left open, your thermostat may call for heat continually. Under these conditions an overheated boiler will undoubtedly result. The Aquastat measures boiler temperature and provides automatic shut down whenever safe limits are exceeded.



I

PRESSURETROL—This safety or limit control is a necessary part of every steam, vapor or vacuum automatic heating system. It may be used by itself to provide protection against high pressure or may be used in combination with the M-H Lo-Water Cutoff for Duplex switch operation.

CONTROL REQUIREMENTS FOR AIR CONDITIONING SYSTEMS INCLUDE

AUTOMATIC CONTROLS



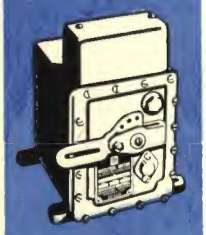
J

HUMIDITY CONTROL — This instrument has a human hair, hygroscopic element which will control, between predetermined limits, the relative humidity in your home. The importance of proper humidity cannot be overestimated and can be had only through automatic control.



K

WATER VALVE — These solenoid valves take their control from the Humidity Controller and are especially designed for domestic application. They are extremely silent — sturdily built — and are so constructed that the seat and plunger may be easily removed for cleaning.

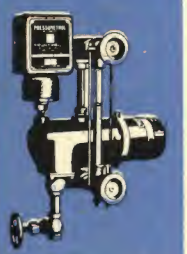


L

MODUTROL MOTOR — The Modutrol Motor is used to automatically operate valves or dampers which in turn control the flow of steam, water, or air. These motors are built in several types, both the two-position "on" and "off" type and the full modulating or proportioning type.

AUXILIARY AUTOMATIC CONTROLS YOU SHOULD CONSIDER

AUTOMATIC CONTROLS



M

LO-WATER CUTOFF — This safety control constantly watches the water level in your boiler and shuts off your automatic burner whenever the water level becomes too low for safety. Combined with the Pressuretrol, as illustrated, it is known as an M-H Duplex Switch.



N

WATER CIRCULATOR — The M-H Packless Seal Circulator should be considered for all hot water heating plants. It makes possible smaller size piping throughout your home and will actually reduce fuel costs. This Circulator is precision built and scientifically lubricated.



O

FLOW VALVE—Flow Valves are used in conjunction with the M-H Packless Seal Circulator to provide a completely automatic summer-winter domestic hot water system. Without the circulator, M-H Motorized Flow Valves and a low limit control provide the same function.

DAMPER CONTROLS FOR HAND FIRED, COAL BURNING HEATING PLANTS

AUTOMATIC CONTROLS



P

DAMPER MOTOR—This is the small but efficient, electrically operated, damper motor supplied with the Electric Janitor Control Packages. It takes its Control from your room thermostat, which may be either the Chronotherm, Da-Nite Acratherm or the plain type Acratherm.

ELECTRIC JANITOR CONTROLS — For the hand-fired heating plant, automatic controls offer economy of operation as well as convenience. These controls are supplied in complete package outfits including the sturdy, fully electric, damper motor (illustrated) together with transformer and all necessary fittings. The room thermostat supplied may be either the Chronotherm (**A**), Da-Nite Acratherm (**B**) or the plain type Acratherm (**C**), all illustrated above. Don't be without Electric Janitor Automatic Controls even though you do not install an automatic burner. Automatic Controls are indispensable in any home, regardless of the type of heating equipment selected.

- One of the Blocks Below Will Fit Your Requirements.
- Study the Opposite Page. ✓ Check the Controls Below That You Want Specified.
- Insist on M-H Controls Throughout Your Home . . . Your Architect Will Recommend M-H.
- CONTROLS IDENTIFIED BY STARS (☆) ARE THE RECOMMENDED INSTRUMENTS YOU SHOULD HAVE.

CHECK YOUR REQUIREMENTS . . . TEAR OUT THIS PAGE FOR YOUR ARCHITECT OR HEATING CONTRACTOR

WARM AIR HEATING PLANT

FOR AUTOMATIC OIL BURNER

ROOM THERMOSTAT
☆ Chronotherm A ☐
Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Protectorelay D ☐

BLOWER OR FAN CONTROL
☆ M-H Furnacestat ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System ☐

FOR AUTOMATIC GAS BURNER

ROOM THERMOSTAT
☆ Chronotherm A ☐
Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Gas Valve E ☐

SAFETY CONTROL
☆ M-H Airstat G ☐
☆ M-H Pilotstat ☐

BLOWER OR FAN CONTROL
☆ M-H Furnacestat ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System ☐

FOR AUTOMATIC COAL BURNER (STOKER)

ROOM THERMOSTAT
☆ Chronotherm A ☐
Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Timerelay or Stokerswitch . F ☐

SAFETY CONTROL
☆ M-H Airstat G ☐

BLOWER OR FAN CONTROL
☆ M-H Furnacestat ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System ☐

HOT WATER SYSTEM

ROOM THERMOSTAT
☆ Chronotherm A ☐
Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Protectorelay D ☐

SAFETY CONTROL
☆ M-H Aquastat H ☐

AUXILIARY CONTROLS
☆ M-H Water Circulator N ☐
☆ M-H Summer-Winter Controls for year 'round hot water ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System ☐

ROOM THERMOSTAT
☆ Chronotherm A ☐
Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Gas Valve E ☐

SAFETY CONTROL
☆ M-H Aquastat H ☐
☆ M-H Pilotstat ☐

AUXILIARY CONTROLS
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Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Timerelay or Stokerswitch . F ☐

SAFETY CONTROL
☆ M-H Aquastat H ☐

AUXILIARY CONTROLS
☆ M-H Water Circulator N ☐
☆ M-H Summer-Winter Controls for year 'round hot water ☐

AIR CONITIONING CONTROLS
☆ M-H Standard System ☐

STEAM OR VAPOR SYSTEM

ROOM THERMOSTAT
☆ Chronotherm A ☐
Da-Nite Acratherm B ☐
Acratherm C ☐

OPERATING CONTROL
☆ M-H Protectorelay D ☐

SAFETY CONTROL
☆ M-H Pressuretrol I ☐
☆ M-H Lo-Water Cutoff M ☐

AUXILIARY CONTROLS
☆ M-H Summer-Winter Controls for year 'round hot water ☐

AIR CONDITIONING CONTROLS
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☆ M-H Summer-Winter Controls for year 'round hot water ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System ☐

AIR CONDITIONING CONTROLS DEPEND UPON THE TYPE AND COMPLETENESS OF THE SYSTEM YOU SELECT

ALL SYSTEMS

● Humidity Control is of vital importance. For health and comfort, Relative Humidity must be maintained within predetermined limits during both summer and winter seasons.

☆ Humidity Controller (J) and Water Valve (K) . . . ☐

● Summer-Winter Automatic Change-Over is indispensable in a year 'round system. Automatic reversal of the control action from the heating to the cooling cycle in response to changes in outside weather assures comfort and economy of operation.

☆ M-H Summer-Winter Automatic Change-Over . . . ☐

● Duct Temperature Controllers are often necessary when it is impossible to find a desirable location for a standard room thermostat.

☆ Minneapolis-Honeywell remote bulb modulating or two position controllers ☐

● If Zone Control is contemplated, use Modutrol motored valves and dampers with proper thermostats or temperature controllers.

☆ Minneapolis-Honeywell Modulating Thermostats and Modutrol Motors (L) ☐

FOR HAND-FIRED HEATING PLANTS — ☆ Use M-H Electric Janitor Controls . . P ☐



Minneapolis Plant where executive offices are located. Additional plants in Philadelphia, Pa., Chicago, Ill. and Wabash, Ind.

MINNEAPOLIS-HONEYWELL REGULATOR CO.

BRANCH OFFICES OR DISTRIBUTORS

for Minneapolis-Honeywell Controls and Brown Instruments

ALABAMA
★Birmingham

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• Stocks of all the Minneapolis-Honeywell controls are constantly carried at our branch offices and distributors in order that we may most quickly fill your needs. A telephone call will bring prompt delivery.

Due to highly specialized requirements for Brown Instruments, they cannot be carried in branch stocks. However, your orders, placed with these offices, will be promptly filled and shipped from the Brown plant.

TRADE MINWAX MARK

WOOD FINISHES
BASEMENT PAINT
WATERPROOFINGS
DAMPPROOFINGS

MINWAX Products

FOR FLOORS · PANELING · BASEMENTS

will help make your home

Lastingly Livable

For thirty-five years, the Minwax Company has been making products to beautify and protect the things you live with—notably for wood floors, paneling, trim and, both interior and exterior, masonry surfaces. The fine quality of Minwax products is attested by their long record of successful use and their wide acceptance by architects, painters, engineers and home owners. The checking list below summarizes the services Minwax protective products offer, which are explained in detail in the following pages. The Minwax Company will be glad to work with you or with your architect or painter on any specific problems within their province that you encounter in the construction of your home.

✓CHECKING LIST

(The Paragraph Numbers i.e. ¶3 in the text below refer to the paragraphs in the following pages which can be checked for more detailed information)

ON WOOD FLOORS, Minwax Flat Finish produces a beautiful, serviceable, lustrous wax finish ¶3 . . . in a wide choice of natural wood colors ¶5. . . . Minwax is easy to apply ¶5 . . . and once Minwaxed, floors never need rescraping because Minwax never scratches or mars white and worn spots can be "patched" ¶6. . . . Minwax produces a beautiful finish that actually improves with use and ordinary care ¶8. . . . Minwax is a definite economy in money, time and labor ¶9 . . . and is widely endorsed ¶10. . . .

ON WOOD PANELING, Minwax Flat Finish brings out the full natural beauty of the wood and creates a lovely wax finish with minimum labor ¶11. . . . Equally good for all woods ¶12 . . . Minwax penetrates, protects and preserves. Special colors for reproducing special effects are available ¶13. . . .

ON BASEMENT FLOORS AND WALLS, Minwax Alkalox is the most economical finish for an attractive, dependable result in a choice of colors ¶17. . . . It dries normally under basement conditions ¶15 . . . and is not softened or made sticky by dampness in concrete and not burned by alkalies nor injured by condensation ¶14. . . .

FOR WATERPROOFING AND DAMPPROOFING, Minwax offers: Caulking Compounds for sealing joints ¶19; . . . Transparent Waterproofings that do not change appearance of masonry ¶20; . . . Brick and Cement Coating that waterproofs, preserves and decorates ¶21; . . . Asphaltic Coatings to moisture-proof exterior foundation walls ¶22; . . . Membrane Waterproofings, for waterproofing under severe pressure conditions ¶23. . . .

BEAUTIFY AND PROTECT THE THINGS YOU LIVE WITH

MINWAX

FOR

FLOORS

BEAUTIFY AND PROTECT THE THINGS YOU LIVE WITH



MODERN ADAPTATION OF OLD-TIME METHODS

The old handcraft finishers literally rubbed oils, gums and waxes *into* the wood to bring out its fullest beauty. The Minwax method adapts this principle by combining oils, gums and wax into *one* liquid which penetrates naturally *into* the wood to bring out its full, true beauty.

Minwax used to match 100-year-old floors and timbers. W. B. Kirby, Architect.

MINWAX FLAT FINISH BEAUTIFIES AND PR

¶1 No material entering the construction of a home possesses so much inherent natural beauty as wood. Correctly finished, wood has qualities which make it lastingly livable, and its surface, properly strengthened, preserved and polished has a natural serviceability that permits it to grow in beauty with use and ordinary care.

¶2 There are two general methods of finishing wood floors. The first is the ordinary shellac or varnish method, by which the finish is put *on top of the surface* of the wood.

¶3 The second is the Minwax Method, proved through more than thirty years of use, to have definite, important advantages in simplicity, economy and permanence. Minwax Flat Finish combines oils, gums and waxes (plus color where desired) in one penetrating liquid that actually puts the finish *in the wood,* toughening and preserving the wood fibres and producing a beautiful, serviceable, lustrous wax finish that is an integral part of the wood itself.

¶4 The special advantages of Minwax Flat Finish are due to this ability to put the finish right into the wood, to the special protective qualities of its ingredients, and the fact that Minwax combines the complete finish in one easily applied material. There are two types of Minwax . . . "Standard," which gives a softer polish, and "Quick Drying," which acts faster and, with Minwax Finishing Wax, gives a higher polish.

¶5 As shown in the Minwax Color Card, Minwax Flat Finish comes in Clear, for the lightest, "natural" floor, and a choice of stains ranging from Golden Oak to Dark Walnut where color is desired. The liquid is flowed onto well-sanded raw wood, allowed to soak in and the excess wiped up. This is repeated for the second coat, and the final polish is given by a wax in more concentrated paste form . . . Minwax Finishing Wax. Nothing could be more simple and straightforward. For floors, the "Quick Drying" Minwax Flat Finish is recommended as better fitting the modern construction schedule and giving a somewhat harder finish and higher polish.

¶6 Because Minwax Flat Finish is truly part of the wood, there is no glassy surface to mar or scratch white. For the same reason, the Minwax finish can wear only as the wood wears, and since one material gives the complete finish, such worn spots as do develop can be removed by simply wiping over them with some of the original finish. This eliminates any need for ever rescraping the floor . . . an inconvenience and expense which is generally necessary when wear breaks through the film of ordinary surface finishes.

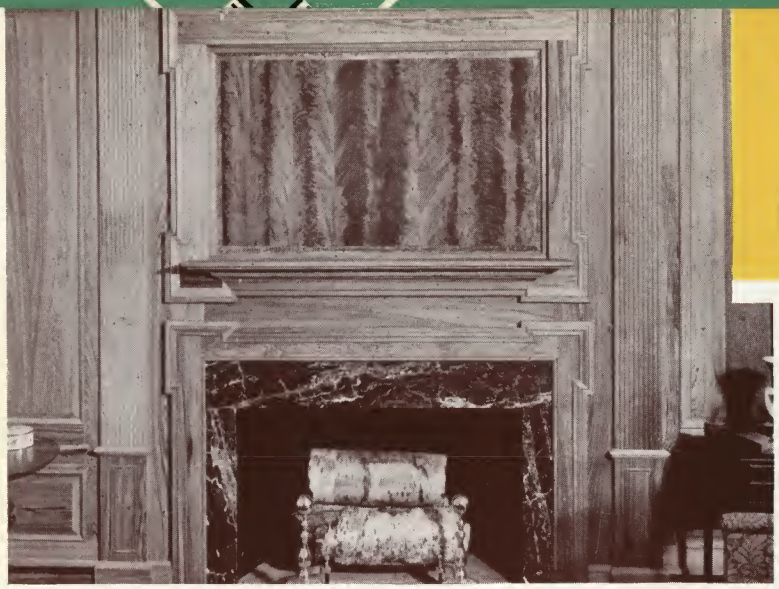
¶7 Further, because a Minwax finish is part of the wood, there is no smooth surface film to be made slippery with wax. The natural "grip" of the wood is preserved and Minwaxed floors are not dangerously slippery.

¶8 The only attention a Minwaxed floor ever needs is dusting and an occasional coat of Minwax Finishing Wax . . . the concentrated wax paste, developed specially for use in conjunction with Minwax Flat Finish. This concentrated wax welds into the original finish so that this simple ordinary care increases the loveliness of the original finish and develops its depth and beauty. The Minwax Company will be glad to

THE *MINWAX* METHOD of WOOD FINISHING is

DEVELOPS THE BEAUTY INHERENT IN WOOD

All the rich beauty of wood paneling is brought out by Minwax Flat Finish . . . used extensively on the exhibit of Canadian woods at the San Francisco Fair, as well as the Western Pine exhibit at the New York Fair. Also widely endorsed by many other wood associations.



Minwax enriches Cypress paneling in "All Wood House" at Great Lakes Exposition.

MINWAX
FOR
PANELING

BEAUTIFY AND PROTECT THE THINGS YOU LIVE WITH

ECTS WOOD FLOORS, PANELING AND TRIM

send, upon request, its interesting and helpful folder . . . *"Care of Your Floors and Woodwork."*

¶9 In the matter of economy, Minwax costs no more than any quality finish, yet offers a very great final economy. Since Minwaxed floors never need rescraping, which, with surface finishes is always more costly even than the original finish, and causes inconvenience, dirt and mess, Minwax Flat Finish *is a true economy*. One rescrape and refinish of even the cheapest surface finish will make your floors cost possibly double the cost of a proper original Minwax job. Since it actually improves with normal care, your Minwax finish will prove a constant source of satisfaction.

¶10 Minwax Flat Finish has been known and widely used for more than thirty years. Its specification by leading architects in all parts of the country, the recommendation of practical painters and floor finishers, the approval of both the National Oak Flooring Manufacturers Association and the Maple Flooring Manufacturers Association, as well as its use in such important building projects as Rockefeller Apartments in New York, Radburn Village in New Jersey, Greendale Village, Milwaukee, Wis., and many other developments of the sort is the best proof of its practicalness, economy, and of the satisfactory results it produces. Ask your Architect and Painter —or write us for samples and further data.

¶11 On wood paneling, Minwax Flat Finish is especially desirable because its adaptation of the old-time handcraft methods brings out to its fullest extent the rich, natural loveliness of the wood and enhances the inherent beauty of the grain. Minwax creates a lovely, soft wax finish without the laborious hand rubbing that was once thought necessary.

¶12 In addition, the penetrative qualities of Minwax protect and preserve the wood, causing it to grow mellower and richer with the passage of time. No matter what wood is used—cheerful pine, rich oak, sturdy cypress, walnut, maple, chestnut, or any one of the new, exotic "modern" woods . . . Minwax is particularly able to enrich its beauty.

¶13 Minwax offers a wide range of colors, all of which are recommended for paneling. (See Minwax Color Card.) These can be blended with great flexibility to permit the development of special effects that reproduce authentically every shade from light Colonial Pine to Dark Walnut. An example of this flexibility of Minwax Flat Finish is Ipswich Pine . . . created to produce by itself a color or tone matching the samples of original Early American pine paneling shown in the American Wing of the Metropolitan Museum in New York. From this shade, either the true Colonial or the lighter, "honey tone" of Pickled Pine can be developed inexpensively and surely. The "Standard" type of Minwax Flat Finish is generally recommended for paneling because it produces the complete finish in two simple coats, and the soft, velvety quality of the finish is an advantage. However, for certain colors, such as Ipswich Pine and others popular for paneling, the "Quick Drying" Minwax is preferable and these colors are therefore available only in this type. If you will write the Minwax Co., stating what type of paneling you have, they will be glad to send samples of Minwax Flat Finish for you to try on the actual wood itself.

e *MODERN* ADAPTION of OLD TIME METHODS

MINWAX

FOR
BASEMENT FLOORS
WATERPROOFING
DAMPPROOFING

BEAUTIFY AND PROTECT THE THINGS YOU LIVE WITH

ALKALOX



The

ALKALI-PROOF PAINT
FOR BASEMENT FLOORS

Report of the
PITTSBURGH TESTING LABORATORY

on the suitability of Alkalox for use on new, green concrete and to resist moisture working in from the back.

Quotation is from Report No. NY 32978, dated May 17, 1937:

"Slabs of 1:2:4 concrete were cast and after twenty-four hours were coated with Alkalox and set with their underside in water." (That is, green, new concrete with water in back of the coating.)

Conclusions:

"**Drying**—Alkalox dried to touch satisfactorily and normally."

"**Condition of Film** — The film of Alkalox was sound and hard with no evidence of the effect of alkalis and no efflorescence."

"**Bond to Surface** — Alkalox showed satisfactory adhesion on all samples."

PITTSBURGH TESTING LABORATORY
N. C. Hoyles, Mgr. New York District.
(signed) E. R. Maurer, Chemist in Charge.

¶14 Proper finishing of basement floors and walls will add greatly to the comfort, livability and beauty of this important part of your home. The laboratories of the Minwax Company have developed a new and superior paint—Alkalox—specially for this purpose. Because it is definitely alkali-proof, Alkalox makes possible clean, dust-proof, beautiful heater rooms, laundries and playrooms, providing glossy, wear-resisting floors that moisture can't harm and that will give you long and trouble-free satisfaction.

¶15 Basement floors and walls have always been notoriously hard to paint because ordinary paints contain ingredients that are injured by the moisture and lime in cements. Alkalox, however, is made with new, synthetic gums and hence dries normally without becoming sticky or soft.

¶16 Moisture working up in back of the coating and carrying lime, softening and burning the coating after it has been applied is one of the major difficulties of basement painting. The ability of Alkalox to resist this condition is proved by the report, reproduced above, of the independent and unbiased Pittsburgh Testing Laboratory, and by many field installations in homes and buildings of many kinds. Alkalox is not softened or burned by this lime and moisture, but is NOT, of course, recommended as a means of preventing leakage nor for use against hydrostatic pressure.

¶17 Alkalox is easy to apply and offers, we believe, the most inexpensive *satisfactory* way to finish your basement. It is available in four bright, scrubproof colors—Medium Gray, Tile Red, Forest Green and Linoleum Brown. Further details about Alkalox may be obtained from your painter, or by writing to the Minwax Company.

WATERPROOFING • DAMPPROOFING • CAULKING

¶18 The Minwax products already described are of almost universal interest to home owners, but mention should be made of another field of Minwax service—waterproofings, preservative coatings, caulkings, etc. In this field, the Minwax Company has, since 1904, rendered outstanding service on all types of construction, and is recognized by architects and engineers as producing materials properly designed for each condition and proved by years of successful use. There are Minwax products for waterproofing and protection above ground as well as products for waterproofing and dampproofing below ground.

¶19 MINWAX CAULKING COMPOUND: For sealing the joint between window and door frames and masonry, or around glass block panels to assure an elastic permanent seal against moisture, drafts, heat-loss, etc. Selected for such outstanding construction as Rockefeller Center, New York, because of its permanent elasticity, this product can render the home owner long, efficient service. Specifications and samples on request.

¶20 TRANSPARENT WATERPROOFING: For the waterproofing of all types of masonry without changing their appearance, these Minwax products penetrate deeply into the masonry and make it, for a very appreciable depth, waterproof and water-repellent. Their dependability and permanency have been amply proved by their use since 1906.

¶21 BRICK AND CEMENT COATING: For brick, stucco and cement-block houses where a truly waterproof coating that both waterproofs and decorates is desired. Developed from Minwax Transparent Waterproofings, and embodying their inherent waterproofing qualities, Brick and Cement Coating is offered in White and ten other standard colors that perform the double function of preservative waterproofing and exterior paint. Color card and specifications on request.

¶22 ASPHALTIC DAMPPROOFINGS: For application to the exterior face of foundation walls to prevent the penetration of moisture and dampness. They are recommended for conditions where hydrostatic pressures do not exist. Complete specifications and data on request.

¶23 MEMBRANE WATERPROOFINGS: For cases of severe hydrostatic pressure, a most thorough, positive means of waterproofing. Specifications and data will be glady forwarded.

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11 W. 42nd ST., NEW YORK

MINWAX CO., INC.

BRANCH OFFICE
232 E. ERIE ST., CHICAGO



Your home begins at your property line

PAGE FENCE

for the residence